Noise Impact Study

1200 CAHUENGA PROJECT
LOS ANGELES, CA

Prepared for:
Bardas Investment Group

December 2022

Report Ref:
R2022154. 2

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EXECUTIVE SUMMARY

This Noise Impact Study (Study) analyzes potential short-term and long-term environmental noise impacts associated with the proposed 1200 Cahuenga project (Project), located in the City of Los Angeles (City), California. The proposed Project includes the development of a creative office at 1200 North Cahuenga Boulevard (between La Miranda Avenue and Lexington Avenue), as shown in Figure 1 (on page 2). This Study has been prepared pursuant to the requirements of the California Environmental Quality Act (CEQA).

Findings

In order to analyze the potential noise impacts of Project construction and operations, the existing ambient noise environment at sensitive noise receptors in the vicinity of the Project Site was measured and tabulated for this report.

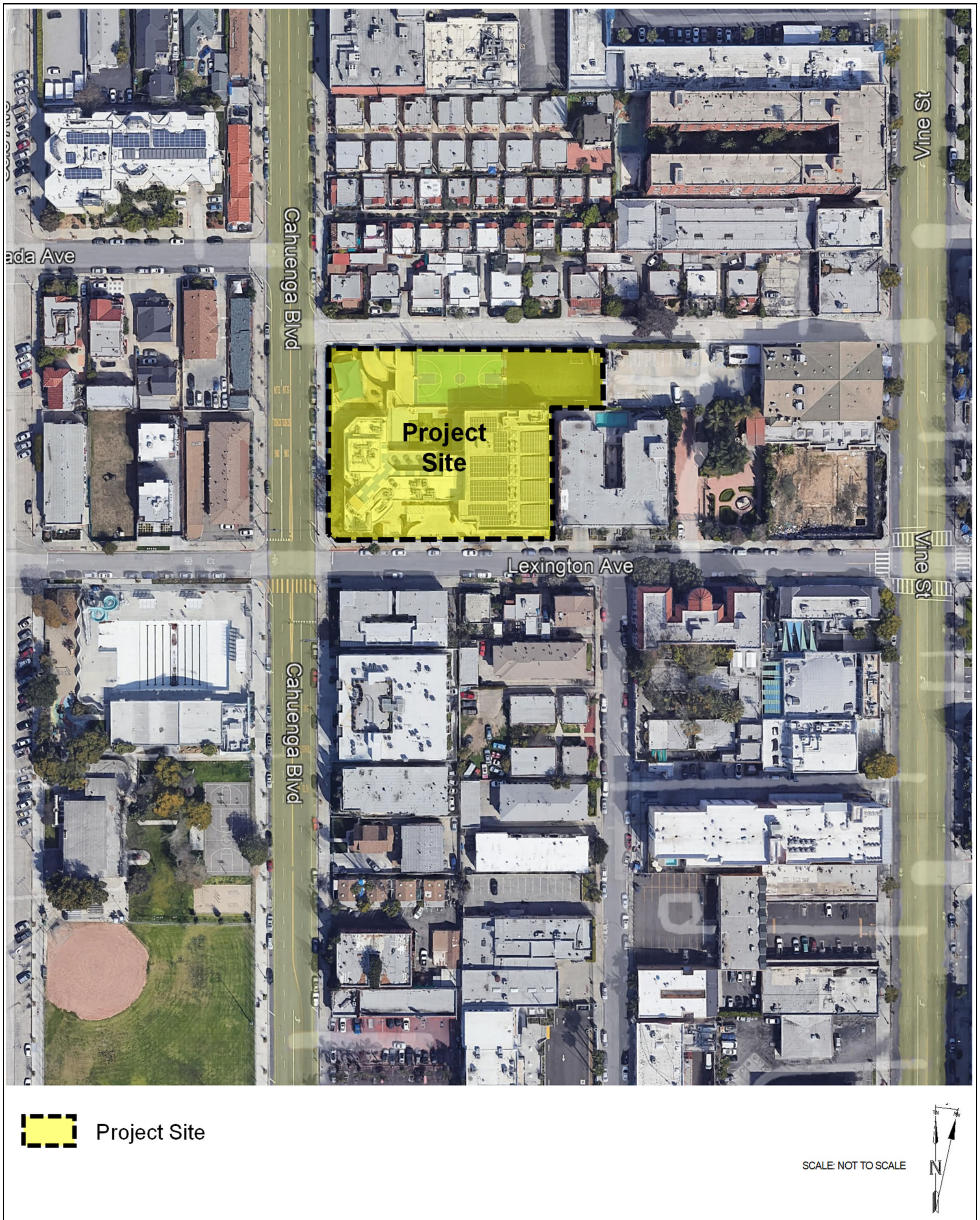
The key findings of the noise analysis are as follows:

Existing Ambient Noise Environment

- Ambient noise measurements were taken at five selected off-site locations, representing the nearest noise sensitive (residential use) receptors to the Project Site, on October 19, 2022. The locations of the five off-site noise-sensitive receptors are shown on Figure 2 (on page 14), as R1 through R5. The existing daytime ambient noise levels at the off-site receptor locations ranged from 56.4 dBA L_{eq} (at receptor R2) to 68.3 dBA L_{eq} (at receptor R5) while the measured nighttime ambient noise levels ranged from 52.6 dBA L_{eq} (at receptor R2) to 62.8 dBA L_{eq} (at receptor R5). The existing ambient noise environment measurements currently exceed the City's exterior presumed daytime ambient noise standard of 50 dBA (L_{eq}) and the presumed nighttime ambient noise standard 40 dBA (L_{eq}) at all off-site receptors. Therefore, consistent with the LAMC, the measured existing ambient noise levels are used as the baseline conditions for the purposes of determining the Project's potential impacts.

Construction Noise Impacts

- The estimated noise levels from the Project's on-site temporary construction activities would temporarily increase current ambient daytime noise levels in the immediate vicinity of the Project Site. The estimated Project construction noise levels at off-site noise sensitive receptors R1, R2, R3 and R5 would exceed the significance criteria by up to 11.6, 13.8, 10.1, and 6.7 dBA, respectively, without the mitigation measures incorporated into the Project. However, the Project's incorporation of noise Mitigation Measure MM-NOI-1 (as described below) would avoid these potential construction-



Source: Google Map, 2022

Figure 1. Project Site Map

related noise impacts at receptors R1, R2, R3 and R5, as Mitigation Measures MM-NOI-1 would result in the noise levels at receptors R1, R2, R3 and R5 being reduced by a minimum of 12, 14, 11 and 7 dBA, respectively, to below the Project significance threshold. Therefore, potential temporary noise impacts associated with Project construction activities would be less than significant.

- Noise generated by construction trucks along the anticipated haul route, Santa Monica Boulevard and North Cahuenga Boulevard leading to the Project Site, would be approximately 60.3 dBA (hourly L_{eq}), which would be below the existing ambient of 64.9 dBA measured along North Cahuenga Boulevard (the measured daytime ambient noise level at receptor R4). Ambient noise along Santa Monica Boulevard would be higher than the ambient noise level along North Cahuenga Boulevard, as this traffic roadway has higher traffic volume. As such, significant noise impacts would not be expected from off-site construction traffic, and no additional noise control measures are required.

Construction Vibration Impacts

- Project construction activities would generate ground-borne vibration associated with the use of heavy construction equipment. However, the estimated vibration velocity levels from Project construction equipment would be below the significance criteria for building damage at the nearest off-site buildings. Therefore, the potential on-site vibration impacts, pursuant to the significance criteria for building damage, during construction of the Project would be less than significant.

- The estimated vibration velocity levels from the Project construction equipment would exceed the 72 VdB significance criteria for human annoyance at receptors R1, R2 and R3, without the mitigation measures incorporated into the Project. However, the Project's incorporation of vibration Mitigation Measure MM-NOI-2 (as described below) would avoid these potential construction-related vibration impacts at receptors R1, R2, and R3, as Mitigation Measures MM-NOI-2 would reduce the vibration velocity levels at receptors R1, R2, and R3, to below the Project significance criteria. Therefore, potential temporary vibration impacts, pursuant to the significance criteria for human annoyance would be less than significant.

Operation Noise Impacts

- On-site stationary noise sources including, but not limited to, building services mechanical equipment, parking facilities, and outdoor uses, were evaluated against the City's exterior noise standard. The estimated noise levels from on-site stationary noise sources would be below the Project significance criteria at all off-site noise sensitive uses. Therefore, potential noise impacts associated with the Project on-site stationary sources would be less than significant.

- Off-site roadway traffic noise impacts were also analyzed based on traffic volumes provided by the Project Traffic Consultant (Overland Traffic Consultants, Inc.). [1] Traffic volumes from the Project would result in a maximum noise increase of 0.1 dBA along Fountain Avenue (between Wilcox Avenue and North Cahuenga Boulevard) and along Lexington Avenue (between North Cahuenga Boulevard and Vine Street), which is considered a negligible increase. In addition, the cumulative traffic volumes would result in a maximum noise increase of 0.8 dBA CNEL along North Cahuenga Boulevard (between De Longpre Avenue and Fountain Avenue) and along Fountain Avenue (between North Cahuenga Boulevard and Vine Street). Generally, a minimum of a 3 dBA change in the noise environment (increase and/or decrease) is considered as a threshold of human perception. The estimated noise increases would be below the 3 dBA significance threshold at both the Project and Cumulative levels. Therefore, potential off-site traffic noise impacts associated with the Project would be less than significant.

- A composite noise analysis was performed to evaluate the noise impacts from all Project-related on-site noise sources. The Project composite noise levels would range from 55.0 dBA at receptor R2 to 62.6 dBA at receptor R5, which levels would be similar to the existing ambient noise levels, as reported in Table 12, below. In addition, the Project plus ambient noise levels would be below the significance criteria at all receptor locations. Therefore, the potential composite noise level impacts due to Project operation would be less than significant.

[1] *Overland Traffic Consultants, Inc., Traffic Assessment for 1200 Cahuenga, December 2021.*

1 INTRODUCTION

This Noise Impact Study (Study) has been prepared to evaluate potential noise impacts associated with the proposed 1200 Cahuenga project (Project), located in the City of Los Angeles (City), California. This Study has been prepared pursuant to the requirements of the California Environmental Quality Act (CEQA).

1.1 Project Description

The Project, a creative office project, is located at 1200 North Cahuenga Boulevard, in the City of Los Angeles, as shown in Figure 1 (on page 2). The Project would replace and refurbish an existing vacant private school complex to provide three buildings (building A, B and C) with a total of 74,762 square feet of creative office and 500 square feet of ground floor retail uses, for a total of 75,262 square feet.

1.2 Purpose

The objectives of this noise study are to:

a) Evaluate the Project's potential construction-related noise impacts on existing off-site noise sensitive uses in the vicinity of the Project Site.

b) Determine potential Project operation-related on-site stationary sources (i.e., building services mechanical equipment, parking operation, and outdoor uses) and off-site mobile sources (auto traffic) noise impacts on existing off-site noise sensitive uses.

c) Evaluate the noise mitigation measures incorporated into the Project to avoid its potential noise impacts or ensure they are less than significant.

2 ENVIRONMENTAL SETTING

2.1 Fundamentals of Sound and Environmental Noise

Noise is commonly defined as sound that is undesirable because it interferes with speech communication and hearing, causes sleep disturbance, or is otherwise annoying (unwanted sound). The decibel (dB) is a conventional unit for measuring the amplitude of sound because it accounts for the large variations in sound pressure amplitude and reflects the way people perceive changes in sound amplitude. The human hearing system is not equally sensitive to sound at all frequencies. Therefore, to approximate this human frequency-dependent response, the A-weighted filtering system is used to adjust measured sound levels (dBA). The term “A-weighted” refers to filtering the noise signal in a manner that corresponds to the way the human ear perceives sound. Examples of various sound levels in different environments are [2]provided in Table 1 (on page 7).

Generally, people judge the relative magnitude of sound sensation by subjective terms such as “loudness” or “noisiness.” To a person with normal hearing, a change in sound level of 3 dB is considered “just perceptible,” a change in sound level of 5 dB is considered “clearly noticeable,” and a change (i.e., increase) of 10 dB is generally recognized as “twice as loud” as the original sound.[3]

2.1.1 Outdoor Sound Propagation

In an outdoor environment, sound levels attenuate (reduce) through the air as a function of distance. Such attenuation is commonly referred to as “distance loss” or “geometric spreading,” and is based on the noise source configuration (e.g., point source, or line source). For a point source, such as a piece of mechanical/electrical/construction equipment (e.g., air conditioner, electrical transformer, or bulldozer), the rate of sound attenuation is about 6 dB per doubling of distance from the noise source. For example, an outdoor condenser fan that generates a sound level of 60 dBA at a distance of five feet would attenuate to 54 dBA at a distance of 10 feet. For a line source, such as a constant flow of traffic on a roadway, the rate of sound attenuation is about 3 dB per doubling of distance.[4]

In addition, structures (e.g., buildings and solid walls) and natural topography (e.g., hills) that obstruct the acoustics line-of-sight between a noise source and a receptor further reduce the noise level at the receptor if the receptor is located within the “shadow” of the obstruction, such as behind a sound wall. This type of sound attenuation is known as “barrier insertion loss.” If

[2] *All sound levels measured in decibel (dB) in this study are relative to $2x10^{-5}$ N/m^2.*

[3] *Caltrans, Technical Noise Supplement (TeNS), Table 2.10, 2013. Technical Noise Supplement to the Caltrans Traffic Noise Analysis Protocol*

[4] *Caltrans, Technical Noise Supplement (TeNS), Chapter 2.1.4.1, 2013. Technical Noise Supplement to the Caltrans Traffic Noise Analysis Protocol*

a receptor is located behind the wall but still has a view of the source (i.e., line-of-sight is not fully blocked), some barrier insertion loss would still occur, however to a lesser extent. Additionally, a receptor located on the same side of the wall as a noise source may actually experience an increase in the perceived noise level as the wall reflects noise back to the receptor, thereby compounding the noise. Outdoor noise barriers can provide noise level reductions ranging from approximately 5 dBA (where a barrier just breaks the acoustic line-of-sight between the noise source and receiver) to an upper range of 20 dBA with a more substantial barrier.[5]

Table 1. Typical Noise Levels

Common Outdoor Activities	Noise Levels, dBA	Common Indoor Activities
	110	Rock Band
Jet Fly-over at 1000 feet		
	100	
Gas Lawn Mower at 3 feet		
	90	
Diesel Truck at 50 feet at 50 mph		Food Blender at 3 feet
	80	Garbage Disposal at 3 feet
Noisy Urban Area, Daytime		
Gas Lawn Mower at 100 feet	**70**	Vacuum Cleaner at 10 feet
Commercial Area		Normal Speech at 3 feet
Heavy Traffic at 300 feet	**60**	
		Large Business Office
Quiet Urban Daytime	**50**	Dishwasher Next Room
Quiet Urban Nighttime	**40**	Theater, Large Conference Room
Quiet Suburban Nighttime		(Background)
	30	Library
Quiet Rural Nighttime		Bedroom at Night, Concert Hall
	20	(Background)
		Broadcast/Recording Studio
	10	
	0	

Source: Caltrans, Technical Noise Supplement (TeNS), Table 2-5, 2013

[5] *Caltrans, Technical Noise Supplement (TeNS), Chapter 2.1.4.4, 2013. Technical Noise Supplement to the Caltrans Traffic Noise Analysis Protocol*

2.1.2 Environmental Noise Descriptors

Several rating scales have been developed to analyze the adverse effect of environmental noise on people. Since environmental noise fluctuates over time, these scales consider the total acoustical energy content, as well as the time and duration of occurrence. The most frequently used noise descriptors, including those used by the City, are summarized below.

Equivalent Sound Level (L_{eq}). L_{eq} is a measurement of the acoustic energy content of noise averaged over a specified time period. Thus, the L_{eq} of a time-varying sound and that of a steady sound are the same if they deliver the same amount of energy to the receptor's ear during exposure. L_{eq} for one-hour periods, during the daytime or nighttime hours, and 24 hours are commonly used in environmental noise assessments. L_{eq} can be measured for any time period, but is typically measured for an increment of no less than 15 minutes for environmental studies.

Community Noise Equivalent Level (CNEL). CNEL is the time average of all A-weighted sound levels for a 24-hour day period with a 10 dBA adjustment (increase) added to the sound levels that occur in the nighttime hours (10:00 p.m. to 7:00 a.m.) and a 5 dBA adjustment (increase) added to the sound levels that occur in the evening hours (7:00 p.m. to 10:00 p.m.). These adjustments attempt to account for increased human sensitivity to noise during the quieter nighttime periods, when the ambient background noise is lower and where sleep is the most probable activity. CNEL has been adopted by the State of California as the rating scale to be used to define the community noise environment for development of the community noise element of a General Plan and is also used by the City of Los Angeles for its land use planning.[6]

2.2 Ground-borne Vibration

Vibration is commonly defined as an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. The peak particle velocity (PPV) or the root-mean square (RMS) velocity is usually used to describe vibration amplitudes. PPV is defined as the maximum instantaneous peak of the vibration signal and is typically used for evaluating potential building damage. [7] The RMS velocity is defined as the square-root of the average of the squared amplitude of the vibration signal and is used for evaluating human response to ground-borne vibration. [8] Decibel notation (VdB) is commonly used to express RMS vibration velocity amplitude. The relationship of PPV to RMS velocity is expressed in terms of the "crest factor," defined as the ratio of the PPV amplitude to the RMS amplitude. PPV is typically a factor of 1.7 to 6 times greater than RMS vibration

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[6] *State of California, General Plan Guidelines, 2017. General Plan Guidelines (ca.gov)*

[7] *Vibration levels described in this report are in terms peak particle velocity level in the unit of inches per second.*

[8] *FTA, "Transit Noise and Vibration Impact Assessment," Section 5, September 2018. Transit Noise and Vibration Impact Assessment Manual (dot.gov)*

velocity[9]; FTA uses a crest factor of 4.[10] Ground-borne vibration generated by man-made activities (e.g., road traffic, construction operations) typically weakens with greater horizontal distance away from the source of the vibration. The vibration impact studies show in most circumstances common ground-induced vibrations related to roadway traffic and construction activities pose no threat to buildings or structures.[11]

2.3 Applicable Noise Regulations

Various government agencies have established noise regulations and policies to protect citizens from potential hearing damage and other adverse effects associated with noise. An overview of the State and City regulations and policies that are relevant to construction and operation of the Project is provided below. The City of Los Angeles has adopted a number of regulations and policies, which are based in part on federal and State regulations and are intended to control, minimize, or mitigate environmental noise effects. The Noise Element of the City of Los Angeles General Plan (General Plan) includes a number of goals, objectives, and policies for land use planning purposes. The City also has regulations to control unnecessary, excessive, and annoying noise, as set forth in the Los Angeles Municipal Code (LAMC) Chapter XI.

2.3.1 City of Los Angeles General Plan Noise Element

The overall purpose of the Noise Element of the General Plan is to guide policymakers in making land use determinations and adopting noise ordinances that would limit exposure of citizens to excessive noise levels. The following policies and objectives from the Noise Element of the General Plan are applicable to the Project:[12]

1. Objective 2 (Non-airport): Reduce or eliminate non-airport related intrusive noise, especially relative to noise-sensitive uses.

2. Policy 2.1: Enforce and/or implement applicable City, State, and federal regulations intended to mitigate proposed noise producing activities, reduce intrusive noise and alleviate noise that is deemed a public nuisance.

3. Objective 3 (Land Use Development): Reduce or eliminate noise impacts associated with proposed development of land and changes in land use.

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[9] *VdB (velocity level in decibel) = 20 x Log (V / V_{ref}), where V is the RMS velocity amplitude in micro-inch per second and V_{ref} is the reference velocity amplitude of $1x10^{-6}$ inch per second (1 micro-inch per second).*

[10] *FTA, "Transit Noise and Vibration Impact Assessment," Section 5, September 2018. Transit Noise and Vibration Impact Assessment Manual (dot.gov)*

[11] *FTA, "Transit Noise and Vibration Impact Assessment," Section 5, September 2018. Transit Noise and Vibration Impact Assessment Manual (dot.gov)*

[12] *Noise Element of the Los Angeles City General Plan, adopted February 3, 1999. Noise Element (lacity.org)*

4. Policy 3.1: Develop land use policies and programs that will reduce or eliminate potential and existing noise impacts.

Table 2 (below) provides the exterior noise standard associated with various land uses, as provided in the City's Noise Element. According to the City, an exterior noise environment up to 70 dBA CNEL is "conditionally acceptable" for noise sensitive uses (e.g., residential, hotel, school). In addition, noise levels up to 75 dBA CNEL are "normally unacceptable", while noise levels at 75 dBA CNEL and above are "clearly unacceptable" for residential.

Table 2. City of Los Angeles Noise Land Use Compatibility

Land Use	Day-Night Average Exterior Sound Level (CNEL dBA)						
	50	**55**	**60**	**65**	**70**	**75**	**80**
Residential Single Family, Duplex, Mobile Home	A	C	C	C	N	In the	In the
Residential Multi-Family	A	A	C	C	N	In the	In the
Transient Lodging, Motel, Hotel	A	A	C	C	N	In the	In the
School, Library, Church, Hospital, Nursing Home	A	A	C	C	N	N	In the
Auditorium, Concert Hall, Amphitheater	C	C	C	C/N	In the	In the	In the
Sports Arena, Outdoor Spectator Sports	C	C	C	C	C/U	In the	In the
Playground, Neighborhood Park	A	A	A	A/N	N	N/U	In the
Golf Course, Riding Stable, Water Recreation, Cemetery	A	A	A	A	N	A/N	In the
Office Building, Business, Commercial, Professional	A	A	A	A/C	C	C/N	N
Agriculture, Industrial, Manufacturing, Utilities	A	A	A	A	A/C	C/N	N

[1] *Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.*
[2] *Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.*
[3] *Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.*
[4] *Clearly Unacceptable: New construction or development should generally not be undertaken.*
Source: City of Los Angeles, General Plan Noise Element, adopted February 1999.

2.3.2 City of Los Angeles Municipal Code

Chapter XI, Noise Regulation, of the LAMC (referred to herein as the Noise Regulations) establishes acceptable ambient sound levels and is intended to regulate intrusive noises (e.g., stationary mechanical equipment and vehicles other than those traveling on public streets) within specific land use zones and to provide procedures and criteria for the measurement of the sound level of noise sources. These procedures recognize and account for differences in the perceived level of different types of noise and/or noise sources. In accordance with the

Noise Regulations, a noise level increase from certain regulated noise sources of 5 dBA over the existing or presumed ambient noise level at an adjacent property line is considered a violation of the Noise Regulations. The 5-dBA increase above ambient is applicable to City-regulated noise sources (e.g., mechanical equipment), and is applicable any time of the day.[13]

The Noise Regulations state that the baseline ambient noise environment shall be the actual measured ambient noise level or the City's presumed ambient noise level, whichever is greater. The actual ambient noise level is the measured noise level averaged over a period of at least 15 minutes, L_{eq} (15-minute). The Noise Regulations state that in cases where the actual measured ambient conditions are not known, the City's presumed daytime (7:00 A.M. to 10:00 P.M.) and nighttime (10:00 P.M. to 7:00 A.M.) ambient noise levels defined in Section 111.03 of the LAMC should be used. The City's presumed ambient noise levels for specific land use zones, as set forth in LAMC Section 111.03, are provided in Table 3 (below).

Table 3. City of Los Angeles Presumed Ambient Noise Levels

Zone	Daytime(7:00 A.M. to 10:00 P.M.)dBA (L_{eq})	Nighttime(10:00 P.M. to 7:00 A.M.)dBA (L_{eq})
Residential, School, Hospitals, Hotels	50	40
Commercial	60	55
Manufacturing (M1, MR1, and MR2)	60	55
Heavy Manufacturing (M2 and M3)	65	65
Source: LAMC Section 111.03.		

The Noise Regulations also address off-road vehicle-related noise, including in Section 114.02, which prohibits the operation of any motor-driven vehicles upon any property within the City in a manner that would cause the noise level on the premises of any occupied residential property to exceed the ambient noise level by more than 5 dBA, and in Section 114.06, which requires that vehicle theft alarm systems be silenced within five minutes.

In addition, the Noise Regulations (LAMC Section 112.05) set a maximum noise level from construction equipment (powered equipment or powered hand tools) operating between the hours of 7:00 A.M. and 10:00 P.M., in any residential zone of the City or within 500 feet thereof, of 75 dBA, measured at a distance of 50 feet from the source, unless compliance with this limitation is technically infeasible. Section 41.40 of the LAMC prohibits construction noise that disturbs persons occupying sleeping quarters in any dwelling, hotel, or apartment or other place of residence between the hours of 9:00[14] P.M. and 7:00 A.M. Monday through Friday,

[13] *Los Angeles Municipal Code, Chapter XI, Section 112.02. [CHAPTER XI NOISE REGULATION (amlegal.com)]*

[14] *In accordance with the Noise Regulations (LAMC Chapter XI, Section 112.05), "technically feasible" means that the established noise limitations can be complied with at a project site, with the use of mufflers, shields, sound barriers, and/or other noise reduction devices or techniques employed during the operation of equipment.*

before 8:00 A.M. and after 6:00 P.M. on Saturday or national holiday, and at any time on Sunday. Construction hours may be extended with approval from the Executive Director of the Board of Police Commissioners.

2.4 Applicable Vibration Standards

The City currently does not have any adopted standards, guidelines, or criteria relative to ground-borne vibration. As such, available guidelines from the Federal Transit Administration (FTA) are utilized in this report to assess the Project's potential impacts due to ground-borne vibration. The FTA has published a technical manual titled, "Transit Noise and Vibration Impacts Assessment," that provides ground-borne vibration impact criteria related to building damage during construction activities. [15]Table 4 (below) provides those vibration impact criteria (based on FTA) applicable to building category. According to FTA guidelines and as shown in Table 4, a vibration level of 0.30 PPV should be used as the threshold indicating a significant structural damage impact for engineered concrete and masonry buildings, and a vibration level of 0.50 PPV should be used as the threshold indicating a significant structural damage impact to structures or buildings constructed of reinforced concrete, steel, or timber.

Table 4. FTA Construction Vibration Impact Criteria for Building Damage

Building Category	Peak Particle Velocity (PPV), (in/sec)
I. Reinforced concrete, steel or timber (no plaster)	0.50
II. Engineered concrete and masonry (no plaster)	0.30
III. Non-engineered timber and masonry buildings	0.20
IV. Buildings extremely susceptible to vibration damage	0.12
Source: FTA, 2018	

In addition, the FTA guidance manual also provides vibration criteria for human annoyance for various uses. These criteria were established primarily for rapid transit (rail) projects and, as indicated in Table 5 (on page 13), are based on the frequency of vibration events. Specific criteria are provided for three land use categories: (1) Vibration Category 1—High Sensitivity; (2) Vibration Category 2—Residential; and (3) Vibration Category 3—Institutional.

[15] *FTA, "Transit Noise and Vibration Impact Assessment," Table 7-5, September 2018. Transit Noise and Vibration Impact Assessment Manual (dot.gov)*

Table 5. FTA Construction Vibration Impact Criteria for Human Annoyance

Land Use Category	Ground-Borne Vibration Impacts Levels (VdB)		
	Frequent Events[a]	Occasional Events[b]	Infrequent Events[c]
Category 1: Building where vibration would interfere with interior operations	65[d]	65[d]	65[d]
Category 2: Residences and buildings where people normally sleep	72	75	80
Category 3: Institutional land uses with primarily daytime uses	75	78	83

[a] *"Frequent Events" are defined as more than 70 vibration events of the same source per day.*
[b] *"Occasional Events" are defined as between 30 and 70 vibration events of the same source per day.*
[c] *"Infrequent Events" are defined as fewer than 30 vibration events of the same source per day.*
[d] *This criterion limit is based on the levels that are acceptable for most moderately sensitive equipment such as optical microscopes.*
Source: FTA, 2018

2.5 Existing Ambient Noise Levels

Some land uses are considered more sensitive to intrusive noise than others based on the types of activities typically engaged in at those land uses. Typically, noise-sensitive uses include residences, transient lodgings, schools, libraries, churches, hospitals, nursing homes, auditoriums, concert halls, amphitheaters, playgrounds, and parks. Based on a review of the land uses in the Project area, there are noise-sensitive land uses (i.e., residential uses and park) surrounding the Project Site to the north, south, east and west. A total of five off-site noise-sensitive receptor locations surrounding the Project Site were selected to represent the multiple noise-sensitive uses surrounding the Project Site. The locations of the five off-site noise-sensitive receptor locations are described in Table 6 (on page 16) and shown on Figure 2 (on page 14), as R1 through R5.

Figure 2. Noise Measurement Locations

Ambient noise measurements were taken at the five selected off-site locations on October 19, 2022. The ambient noise measurements were conducted using a Larson-Davis Model 870 and a Quest Model 2900 Integrating/Logging Sound Level Meters. These sound level meters meet and exceed the minimum industry standard performance requirements for “Type 1” and “Type 2” standard instruments as defined in the American National Standard Institute (ANSI) S1.4. A 24-hour measurement was conducted at receptor R2. Two 15-minute measurements were conducted at off-site receptors R1, R3, R4 and R5, one during the daytime hours and another during the nighttime hours. The daytime ambient noise levels were measured between 10:00 A.M. and 12:00 P.M., and the nighttime ambient noise levels were measured between 10:00 P.M. and 12:00 A.M. The ambient noise measurements were taken in accordance with the City’s standards.

The results of the ambient sound measurements are summarized in Table 6 (on page 16). As indicated inTable 6, the existing daytime ambient noise levels at the off-site receptor locations ranged from 56.4 dBA L_{eq} (at receptor R3) to 68.3 dBA L_{eq} (at receptor R5), while the measured nighttime ambient noise levels ranged from 52.6 dBA L_{eq} (at receptor R2) to 62.8 dBA L_{eq} (at receptor R5). Based on field observation and the measured sound data, the current ambient noise environment in the vicinity of the Project Site is controlled primarily by vehicular traffic on local roadways (e.g., North Cahuenga Boulevard), commercial uses, and other typical urban noise. The existing ambient noise levels at all receptor locations currently exceed the City’s exterior presumed daytime ambient noise standard of 50 dBA (L_{eq}) and presumed nighttime ambient noise standard 40 dBA (L_{eq}) , for residential uses. Therefore, consistent with the LAMC, the measured existing ambient noise levels are used as the baseline conditions for the purposes of determining the Project’s potential noise impacts.

Table 6. Existing Ambient Noise Levels

Receptor Location	Approximate Distance to Project Site,[a] Feet	Measured Ambient Noise Levels, dBA L_{eq} Daytime Hours (7 a.m. to 10 a.m.)	Measured Ambient Noise Levels, dBA L_{eq} Nighttime Hours (10 p.m. to 7 a.m.)	CNEL, (24-hour)
R1 – Single-family residential use located on the north side of La Mirada Avenue, north of the Project Site	35	57.8	58.8	63.3[b]
R2 – Multi-family residential use on the north side of Lexington Avenue, adjacent to the Project Site to the east	Adjacent to the Project Site	57.0[c]	52.6[c]	60.4
R3 – Multi-family residential use on the south side of Lexington Avenue, south of the Project Site	50	56.4	55.2	60.1[b]
R4 – Park use on the westside of North Cahuenga Boulevard, southwest of the Project Site	250	64.9	60.3	66.3[b]
R5 – Multi-family residential use on the west side of North Cahuenga Boulevard, west of the Project Site	80	68.3	62.8	69.2 [b]

[a] *Distances are estimated based on Google Earth map and are referenced to the Project nearest boundary.*
[b] *Estimated based on short-term (15-minute) noise measurement.*
[c] *Levels shown for R2 represent the average for the entire daytime and nighttime periods.*
Source: AES, 2022; Detail measurements data are provided in Appendix A.

3 IMPACT ANALYSIS

3.1 Methodology

3.1.1 Temporary Construction Noise

Potential construction noise impacts due to on-site construction activities associated with the Project were evaluated by calculating the construction-related noise levels at the representative receptor locations and comparing these estimated Project construction-related noise levels to the measured existing ambient noise levels (i.e., noise levels without construction noise from the Project). Construction noise associated with the Project was analyzed based on the Project's potential construction equipment inventory, construction durations, and construction schedule. The construction equipment noise levels are based on the published noise data (equipment source levels) by Federal Highway Administration (FHWA) "Roadway Construction Noise Model (FHWA 2006)". The construction noise levels were then calculated for the identified sensitive receptor locations based on the standard point source noise-distance attenuation factor of 6.0 dBA for each doubling of distance. For the noise analysis, a 5 dBA attenuation was assigned for receptor locations where the acoustic line-of-sight is just interrupted (i.e., around the edge of a building).

In addition, the potential construction-related off-site truck noise impacts were analyzed using the FHWA's Traffic Noise Model (TNM). The TNM noise model calculates the hourly L_{eq} noise levels generated by construction-related trucks. Potential noise impacts were determined by comparing the predicted noise level generated by construction-related off-site trucks with the existing ambient noise levels.

3.1.2 Temporary Construction Vibration

Ground-borne vibration impacts due to the Project's construction activities were evaluated by identifying potential vibration sources (i.e., construction equipment), estimating the vibration levels at the identified representative sensitive-receptor locations, and comparing the Project's vibration levels at those locations to the applicable vibration significance criteria, as described below.

Vibration levels were calculated based on the FTA published standard vibration velocities for various construction equipment operations. The vibration velocities were calculated based on a point source with standard distance propagation conditions, pursuant to FTA procedures. Construction of the Project would not use impact pile driving methods and as such, impact pile driving vibration is not included in this construction vibration analysis. [16]

[16] *FTA, "Transit Noise and Vibration Impact Assessment," Table 7-4, September 2018. Transit Noise and Vibration Impact Assessment Manual (dot.gov)*

3.1.3 Operation Noise

The Project's potential on-site stationary point-source noise impacts were evaluated by (1) identifying the noise levels that would be generated by the Project's stationary noise sources, such as rooftop mechanical equipment, outdoor activities (e.g., use of the outdoor courtyard, roof deck and terraces), and parking facilities; (2) calculating the noise level from each noise source at the identified surrounding representative sensitive-receptor property line locations; and (3) comparing such noise levels to the measured ambient noise levels to determine significance. The on-site stationary noise sources were calculated using SoundPLAN (version 8.2), a 3-dimensional computer noise prediction model, which calculates noise transference (propagation) using approved engineering procedures and incorporates national and international noise standards. This calculation tool is widely used by acoustical engineers as a noise modeling tool for environmental noise analysis.

The Project's potential off-site roadway noise was analyzed using the FHWA's TNM, based on the roadway traffic data provided in the Project's transportation study. The TNM is the current Caltrans standard computer noise model for traffic noise studies. The model allows for the input of roadway parameters, noise receivers, and sound barriers (if any). Roadway noise attributable to the Project's "existing plus project" scenario was calculated and compared to the "existing without project" scenario noise levels to determine the Project's potential off-site roadway noise impacts.

3.2 Thresholds of Significance

The City has determined to assess the significance of the Project's potential impacts based on the checklist items set forth in Appendix G to the State CEQA Guidelines. In accordance with the State CEQA Guidelines Appendix G, the Project would have a significant impact related to noise if it would result in the:

Threshold (a): *Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; or*

Threshold (b): *Generation of excessive groundborne vibration or groundborne noise levels; or*

Threshold (c): *For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?*

3.3 Project Design Features and Mitigation Measure Incorporated Into the Project

The Project incorporates the following Project Design Feature (PDF), and the Applicant has agreed to incorporate the following Mitigation Measure into the Project to avoid or reduce the Project's potential construction noise and vibration impacts.

Project Design Feature PDF-NOI-1: Project construction will not include the use of driven (impact) pile systems.

Project Design Feature PDF-NOI-2: Outdoor amplified sound systems, if any, will be designed so as not to exceed the maximum noise level of 80 dBA (L_{eq}) at a distance of 15 feet from the face of the loudspeakers, from all outdoor spaces. A qualified noise consultant will provide written documentation that the design of the system complies with this maximum noise level.

Mitigation Measure MM-NOI-1: A temporary and impermeable sound barrier shall be erected at the following locations, prior to the start of earth moving activities. At plan check, building plans shall include documentation prepared by a noise consultant verifying compliance with this measure.

- Along the northern property line of the Project Construction Site between the construction area and the residential uses to the north (represented by receptor location R1). The temporary sound barrier shall be designed to provide a minimum 12-dBA noise reduction at the ground level of receptor location R1.
- Along the southern property line of the Project Construction Site between the construction area and the residential use to the east (represented by receptor location R2). The temporary sound barrier shall be designed to provide a minimum 14-dBA noise reduction at the ground level of receptor location R2.
- Along the southern property line of the Project Construction Site between the construction area and the residential uses to the south (represented by receptor location R3). The temporary sound barrier shall be designed to provide a minimum 11-dBA noise reduction at the ground level of receptor location R3.
- Along the western property line of the Project Construction Site between the construction area and the residential uses to the west (represented by receptor location R5). The temporary sound barrier shall be designed to provide a minimum 7-dBA noise reduction at the ground level of receptor location R5.

Mitigation Measure MM-NOI-2: The following mitigation measures are provided to reduce the vibration impacts associated with potential human annoyance.

- The use of large construction equipment (i.e., large bulldozer, caisson drill rig, and/or loaded trucks) shall be a minimum of:

  - 35 feet from the Project northern property line
  - 30 feet from the Project southern property line
  - 70 feet from the Project eastern property line (near the building at receptor R2)
- The use of jackhammer shall be a minimum of 35 feet from the Project eastern/southern property line (near the building at receptor R2).

3.4 Project Impacts

Threshold (a): Would the Project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

3.4.1 Temporary Construction Noise

Project construction would generate noise from on-site construction activities and from off-site construction traffic.

3.4.1.1 On-Site Construction Noise

Noise levels generated from on-site Project construction activities would be a function of the noise generated by construction equipment, the location of the equipment, the timing and duration of the noise-generating construction activities, and the relative distance to noise-sensitive receptors. Construction activities for the Project would generally include demolition, site grading, building construction, and landscaping. Each stage of construction would involve the use of various types of construction equipment and would, therefore, have its own distinct noise characteristics. Demolition generally involves the use of backhoes, front-end loaders, and heavy-duty trucks. Grading and excavation typically require the use of earth-moving equipment, such as excavators, front-end loaders, and heavy-duty trucks. Building construction typically involves the use of forklifts, concrete trucks, concrete pumps, and delivery trucks. Project construction equipment would generate both steady-state and episodic noise that could be heard at locations within and adjacent to the Project Site. Construction of the Project is anticipated to take approximately 19 months.

Individual pieces of construction equipment that would typically be used for construction produce maximum noise levels of 74 dBA to 90 dBA at a reference distance of 50 feet from the construction equipment, as shown in Table 7 (on page 21). It should be noted that pile drivers are not included in Table 6 because Project Design Feature PDF-1 prohibits their use. The construction equipment noise levels produced at the 50-foot distance (Reference Maximum Noise Levels at 50 Feet) shown in Table 6 are taken from the FHWA Roadway Construction Noise Model User's Guide (RCNM, 2006), which is a technical report containing actual measured noise data for construction equipment. [17] These maximum noise levels would occur when equipment is operating under full power conditions (i.e., the equipment engine at maximum speed). However, equipment used on construction sites often operates under less than full power conditions, or part power. To characterize construction-period noise levels more accurately, the average (Hourly L_{eq}) noise level associated with each construction stage is calculated based on the quantity, type, and usage factors for each type of equipment that would be used during each construction stage. [18] These noise levels are typically associated with multiple pieces of equipment operating simultaneously.

Table 7. Construction Equipment Noise Emission Reference Levels and Usage Factors

Type of Equipment	Acoustical Usage Factor (%)	Reference Maximum Noise Levels at 50 Feet,[a] L_{max} (dBA)
Air Compressor	40	78
Backhoe	40	78
Cement and Mortar Mixer	50	80
Concrete Saw	20	90
Crane	16	81
Dozer	40	82
Dump/Haul Truck	40	76
Excavator	40	81
Forklift	20	75
Generator Set	50	81
Grader	40	85
Jackhammer	20	89
Man Lift	20	75
Paving Equipment	50	77
Roller	20	80
Rubber Tired Loader	40	79
Delivery Truck	40	74
Welders	40	74
Pneumatic Tool	50	85

[a] *Construction equipment noise levels are based on the FHWA RCNM.*
Source: FHWA Roadway Construction Noise Model User's Guide, Table 1, 2006

Table 8 (on page 22) provides the Project's estimated construction noise levels without Project's incorporation of Mitigation Measure MM-NOI-1 for various construction phases at the identified off-site noise sensitive receptor locations. To present a conservative impact

[17] *FHWA, Roadway Construction Noise Model User's Guide, 2006. Roadway Construction Noise Model User's Guide (dot.gov)*

[18] *Pursuant to the FHWA Roadway Construction Noise Model User's Guide, 2006, the usage factor is the percentage of time during a construction noise operation that a piece of construction is operating at full power.*

analysis, the Project's "without Mitigation Measure MM-NOI-1" estimated noise levels were calculated for a scenario in which all pieces of construction equipment were assumed to be operating simultaneously and to be located at the construction area nearest to the sensitive receptors. These assumptions represent the worst-case "without Mitigation Measure MM-1" noise scenario because construction activities would typically be spread out throughout the Project Site, and, thus, some equipment would be farther away from the affected sensitive receptors.

As reported in Table 8, the estimated "without Mitigation Measure MM-NOI-1" construction noise levels at off-site noise sensitive receptor locations R1, R2, R3 and R5 would exceed the significance criteria by up to 11.6, 13.8, 10.1, and 6.7 dBA, respectively.

Table 8. Construction Noise Levels
(Without Incorporation of Mitigation Measure MM-NOI-1)

Location	Estimated Noise Levels by Construction Phase,[a, b] dBA (L_{eq})					Significance Criteria, dBA (L_{eq})	Exceedance Over Significance Criteria, dBA (L_{eq})
	Demolition	Grading	Building Construction	Paving	Arch. Coating		
R1	**86.6**	**86.1**	**80.9**	**81.9**	**77.1**	75.0	11.6
R2	**88.8**	**88.5**	**82.9**	**84.4**	**80.0**	75.0	13.8
R3	**85.1**	**84.5**	**79.7**	**80.1**	74.0	75.0	10.1
R4	72.9	71.5	68.1	67.3	60.0	75.0	0.0
R5	**81.7**	**80.8**	**76.5**	**76.5**	69.9	75.0	6.7

[a] *Detailed calculation worksheets, are included in Appendix B.*
[b] ***Bold-faced** represents noise levels exceeded the significance criteria.*
Source: AES, 2022

However, as discussed above, the Applicant has agreed to, and the Project has incorporated, Mitigation Measure MM-NOI-1. As reported in Table 9 (on page 23), the Project's on-site construction noise levels at receptor locations R1, R2, R3 and R5 would be a minimum of 12, 14, 11 and 7 dBA, respectively, lower than the noise levels shown in Table 8 (above), and less than significant, assuming incorporation of Mitigation Measure MM-NOI-1. Therefore, the Project's potential temporary on-site construction noise impacts would be less than significant, with incorporation of mitigation measures.

Table 9. Construction Noise Levels
(With Incorporation of Mitigation Measure MM-NOI-1)

Location	Estimated Noise Levels by Construction Phase,[a, b] dBA (L_{eq})					Significance Criteria, dBA (L_{eq})
	Demolition	Grading	Building Construction	Paving	Arch. Coating	
R1	74.6	74.1	68.9	69.9	65.1	75.0
R2	74.8	74.5	68.9	70.4	66.0	75.0
R3	74.1	73.5	68.7	69.1	63.0	75.0
R4	72.9	71.5	68.1	67.3	60.0	75.0
R5	74.7	73.8	69.5	69.5	62.9	75.0

[a] *Detailed calculation worksheets, are included in Appendix B.*
[b] ***Bold-faced** represents noise levels exceeded the significance criteria.*
Source: AES, 2022

3.4.1.2 Off-Site Construction Noise

In addition to on-site construction noise sources, materials delivery, concrete mixing, and haul trucks (construction trucks), and construction worker vehicles would require access to the Project Site during the Project construction period. The major noise sources associated with offsite construction trucks would be from haul trucks during the site grading, which would require a total of approximately 906 haul trips, with approximately 40 trucks per day. Construction-related trucks would be fewer during other construction phases. Therefore, the noise analysis is based on the peak period (site grading phase) with a maximum of 40 trucks (80 truck trips) per day. Based on a six-hour haul period and a uniform distribution of trips, there would be 14 truck trips per hour. Haul trucks would generally access the Project Site via North Cahuenga Boulevard and Santa Monica Boulevard to the Hollywood Freeway (US-101).

Noise generated by construction trucks along the anticipated haul route, Santa Monica Boulevard and North Cahuenga Boulevard leading to the Project Site, would be approximately 60.3 dBA (hourly L_{eq}), which would be below the measured existing ambient noise environment of 64.9 dBA along North Cahuenga Boulevard Avenue (measured ambient at receptor R4). The existing ambient noise environment along Santa Monica Boulevard would be higher than that along North Cahuenga Boulevard, as Santa Monica Boulevard has higher traffic volume; therefore, the noise generated by construction trucks along Santa Monica Boulevard would also be below that street's existing ambient noise environment. As such, significant noise impacts would not be expected from off-site construction traffic, and no additional noise control measures are required.

3.4.2 Operation Noise

Noise associated with Project operation would include: (a) on-site stationary noise sources, including outdoor mechanical equipment (e.g., HVAC equipment), activities within the proposed outdoor spaces (e.g., use of the outdoor courtyard, roof deck and terraces), and parking facilities; and (b) off-site mobile (roadway traffic) noise sources.

3.4.2.1 Mechanical Equipment

The Project would include new mechanical equipment (e.g., HVAC air ventilation equipment), which would be located at the roof level and/or within the building structure. Project-related outdoor mechanical equipment is required to be designed so as not to increase the existing ambient noise levels by 5 dBA in accordance with the City's Noise Regulations (Section 112.02 of the LAMC). Table 10 (below) presents the estimated on-site mechanical equipment noise levels at the off-site receptor locations. As shown in Table 10, the estimated noise levels generated by the mechanical equipment would range from 34.2 dBA (L_{eq}) at receptor R2 to 45.5 dBA (L_{eq}) at receptor R5, which would be below the Project's significance criteria and the existing ambient noise levels at all sensitive receptor locations; further, the Project noise level from the mechanical equipment added to the ambient noise level at each sensitive receptor location yields a noise level that would also be below the threshold for each sensitive receptor. As such, potential noise impacts from the Project mechanical equipment would be less than significant.

Table 10. Mechanical Equipment Noise Levels

Receptor Location	Existing Ambient Noise Levels, dBA (Leq)	Estimated Noise from Project Mechanical Equipment, dBA (Leq)	Ambient + Project Noise Levels, dBA (Leq)	Significance Criteria[a] dBA (L_{eq})	Exceed over Significance Criteria	Significant Impact?
R1	57.8	43.3	58.0	62.8	0.0	No
R2	52.6	34.2	52.7	57.6	0.0	No
R3	55.2	43.2	55.5	60.2	0.0	No
R4	60.3	40.3	60.3	65.3	0.0	No
R5	62.8	45.5	62.9	67.8	0.0	No

Notes:
[a] *Significance Criteria are equivalent to the measured daytime or nighttime ambient noise levels, whichever is lower plus 5 dBA, per the City of Los Angeles Noise Regulations.*
Source: AES, 2012

3.4.2.2 Outdoor Spaces

The Project's outdoor amenities would include several common outdoor spaces, including: a courtyard at 1st Floor, two covered terraces at 2nd Floor (Building A), four exterior decks at 3rd Floor (Buildings A & C), and four exterior decks at the 4th Floor (Buildings A & C). Noise sources associated with outdoor uses typically include noise from people gathering and conversing. For this operational noise analysis, reference noise levels of 65 dBA for a male and 62 dBA for a female speaking in a raised voice were used for analyzing potential noise impacts from people gathering at the outdoor spaces. [19] The noise analysis assumed up to 120, 43, 328 and 578 people gathering at the outdoor spaces at 1st Floor, 2nd Floor, 3rd Floor, and 4th Floor, respectively. The number of people is calculated based on 15 square feet per person.

An additional potential noise source associated with outdoor spaces would be the use of an outdoor sound system (e.g., music or other sounds broadcast through an outdoor mounted speaker system) at the outdoor spaces. As set forth in the Project Design Feature PDF-NOI-2, if an amplified sound system is used, it would be designed so as not to produce sound exceeding the maximum noise level of 80 dBA L_{eq} at a distance of 15 feet from the face of the loudspeakers, at all outdoor spaces, which would ensure that the amplified sound system would not produce noise levels exceed the significance criteria (i.e., an increase of 5 dBA L_{eq}) at any off-site noise sensitive receptor location.

Table 11 (below) presents the estimated noise levels at the off-site sensitive receptors resulting from the use of the Project's outdoor areas. The estimated noise levels were calculated based on the assumption that the outdoor spaces would be fully occupied and operating concurrently, to represent a worst-case noise analysis. As presented in Table 11, the estimated noise levels from the outdoor spaces would range from 49.1 dBA (L_{eq}) at receptor location R2 to 58.0 dBA (L_{eq}) at receptor location R5, which levels would be below the Project's significance criteria and the ambient noise levels at all sensitive receptor locations other than R3; further, the Project noise level from the outdoor areas added to the ambient noise level at each sensitive receptor location yields a noise level that would also be below the threshold for each sensitive receptor. Therefore, noise impacts from the outdoor uses would be less than significant, and no mitigation measures are required.

Table 11. Outdoor Uses Noise Levels

Receptor Location	Existing Ambient Noise Levels, dBA (L_{eq})	Estimated Noise from Outdoor Uses, dBA (L_{eq})	Ambient + Project Noise Levels, dBA (L_{eq})	Significance Criteria[a] dBA (L_{eq})	Exceed over Significance Criteria	Significant Impact?
R1	57.8	50.9	58.6	62.8	0.0	No
R2	52.6	49.1	54.2	57.6	0.0	No
R3	55.2	56.6	59.0	60.2	0.0	No
R4	60.3	51.6	60.8	65.3	0.0	No
R5	62.8	58.0	64.0	67.8	0.0	No

Notes:
[a] *Significance Criteria are equivalent to the measured daytime or nighttime ambient noise levels, whichever is lower plus 5 dBA, per the City of Los Angeles Noise Regulations.*
Source: AES, 2022

[19] *Cyril M. Harris, Handbook of Acoustical Measurements and Noise Control, Table 16.1, Third Edition, 1991. Handbook of Acoustical Measurements & Noise Control: Cyril M. Harris: 9781563967740: Amazon.com: Books*

3.4.2.3 Parking Facilities

Parking for the Project would be provided within two at-grade levels (in Buildings A and C) and two below-grade levels (in Buildings A and B) that would provide a total of approximately 156 parking spaces. The parking garage would be partially shielded to the exterior with the wall along the parking garages. Table 12 (below) presents the estimated noise levels from parking garage at the offsite receptor locations. As indicated in Table 12, the estimated noise levels from the parking garage would range from 27.5 dBA (L_{eq}) at receptor location R4 to 41.2 dBA (L_{eq}) at receptor location R1, which would be below the Project significance criteria. Therefore, noise impacts from the parking garage would be less than significant, and no mitigation measures are required.

Table 12. Parking Facilities Noise Levels

Receptor Location	Existing Ambient Noise Levels, dBA (L_{eq})	Estimated Noise from Project Parking, dBA (L_{eq})	Ambient + Project Noise Levels, dBA (L_{eq})	Significance Criteria[a] dBA (L_{eq})	Exceed over Significance Criteria	Significant Impact?
R1	57.8	41.2	57.9	62.8	0.0	No
R2	52.6	28.0	52.6	57.6	0.0	No
R3	55.2	36.0	55.3	60.2	0.0	No
R4	60.3	27.5	60.3	65.3	0.0	No
R5	62.8	36.1	62.8	67.8	0.0	No

Notes:
[a] *Significance criteria are equivalent to the measured daytime or nighttime ambient noise levels, whichever is lower plus 5 dBA, per the City of Los Angeles Noise Regulations.*
Source: AES, 2022

3.4.2.4 Off-Site Traffic

Potential Project-generated traffic noise impacts were evaluated by comparing the increase in noise levels from the “existing” condition scenario to the “existing plus project” condition scenario, in the Traffic Assessment, against the Project’s significance threshold. Traffic noise levels at the off-site noise sensitive receptor locations were calculated using FHWA’s Traffic Noise Model and the Project’s traffic volume data from the Traffic Assessment. [20] The traffic noise impact analysis is based on the 24-hour CNEL noise descriptor.

Table 13 (on page 28) provides a summary of the off-site traffic noise analysis. As shown in Table 13, traffic from the Project would result in a maximum noise increase of 0.1 dBA along Fountain Avenue (between Wilcox Avenue and North Cahuenga Boulevard) and along Lexington Avenue (between North Cahuenga Boulevard and Vine Street), which is considered

[20] *Overland Traffic Consultants, Inc., email dated 8/24/2022.*

a negligible increase. In addition, the cumulative traffic volumes would result in a maximum increase of 0.8 dBA CNEL along North Cahuenga Boulevard (between De Longpre Avenue and Fountain Avenue) and along Fountain Avenue (between North Cahuenga Boulevard and Vine Street); again, however, the Project's contribution would be negligible and, therefore, not cumulatively considerable. Generally, a minimum 3 dBA change in the ambient noise environment (increase and/or decrease) is considered to be at the threshold of human perception, which the City has adopted as its threshold of significance. The estimated noise increases would be below the 3 dBA significance threshold under both Project and Cumulative level. Therefore, off-site traffic noise impacts associated with the Project would be less than significant.

Table 13. Off-Site Roadway Traffic Noise Impacts

Roadway Segment	Calculated Traffic Noise Levels,[a] CNEL (dBA)			Increase in Noise Levels, CNEL (dBA)		Significant Impact?	
	Existing Without Project (A)	Future Without Project (B)	Future With Project (C)	Project Level (C – B)	Cumulative (C – A)	Project Level	Cumulative
North Cahuenga Boulevard							
- Between De Longpre Ave. and Fountain Ave.	71.1	71.9	71.9	0.0	0.8	No	No
- Between Fountain Ave. and Lexington Ave.	70.8	71.4	71.4	0.0	0.6	No	No
- Between Lexington Ave. and Santa Monica Blvd.	70.8	71.3	71.3	0.0	0.5	No	No
Vine Street							
- Between De Longpre Ave. and Fountain Ave.	72.3	72.8	72.8	0.0	0.5	No	No
- Between Fountain Ave. and Lexington Ave.	72.2	72.7	72.7	0.0	0.5	No	No
- Between Lexington Ave. and Santa Monica Blvd.	72.2	72.7	72.7	0.0	0.5	No	No
Fountain Avenue							
- Between Wilcox Ave. and Cahuenga Blvd.	70.1	70.4	70.5	0.1	0.4	No	No
- Between North Cahuenga Blvd. and Vine St.	70.2	71.0	71.0	0.0	0.8	No	No
- Between Vine St. and El Centro Ave.	69.9	70.2	70.2	0.0	0.3	No	No
Lexington Avenue							
- Between Wilcox Ave. and North Cahuenga Blvd.	66.5	67.0	67.0	0.0	0.5	No	No
- Between North Cahuenga Blvd. and Vine St.	65.8	66.4	66.5	0.1	0.7	No	No
- Between Vine St. and El Centro Ave.	64.2	64.6	64.6	0.0	0.4	No	No

[a] Detailed calculation worksheets, are included in Appendix C.
Source: AES, 2022.

3.4.2.5 Composite Noise Impacts from Project Operations

An evaluation of composite noise levels, including all Project related noise sources, was conducted to identify the potential maximum Project-related noise level increase that may occur at the Project noise-sensitive receptor locations. The overall sound environment at the areas surrounding the Project Site would include contributions from each on-site individual noise source associated with the typical daily operation of the Project. Principal on-site noise sources associated with the Project would include the mechanical equipment, the parking facilities, and outdoor uses. Table 14 (below) presents the estimated composite noise levels from Project-related noise sources. As reported in Table 14, the Project's composite noise levels would range from 55.0 dBA at receptor R2 to 62.6 dBA at receptor R5, which would be similar to the existing ambient noise levels. In addition, the Project plus ambient noise levels would be below the significance criteria at all receptor locations. Therefore, the composite noise level impacts due to Project operation would be less than significant.

Table 14. Composite Noise Impacts

Receptor Location	Calculated Project-Related Noise Levels, CNEL (dBA)				Project Composite Noise Levels, CNEL (dBA)	Ambient Noise Levels, CNEL (dBA)	Ambient Plus Project Composite Noise Levels, CNEL (dBA)	Significance Criteria[a], CNEL (dBA)
	Traffic	Mechanical	Parking	Outdoor Uses				
R1	44.9	50.0	47.9	55.0	57.0	63.3	64.2	68.3
R2	49.5	40.9	34.7	53.2	55.0	60.4	61.5	65.4
R3	49.5	49.9	42.7	60.7	61.4	60.1	63.8	65.1
R4	44.9	47.0	34.2	55.7	56.6	66.3	66.7	71.3
R5	44.9	52.2	42.8	62.1	62.6	69.2	70.1	72.2

[a] *Significance criteria are equivalent to the existing ambient plus 3 dBA if the estimated noise levels (ambient plus Project) fall within the "normally unacceptable" or "clearly unacceptable" land use categories or ambient plus 5 dBA if the estimated noise levels fall within the "normally acceptable" or "conditionally acceptable" land use categories, per the City of Los Angeles Noise Element. If the estimated noise levels exceed those significance criteria, a noise impact is identified.*

Source: AES, 2022

Threshold (b): Would the Project result in the exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?

3.4.3 Temporary Construction Vibration

Construction activities can generate varying degrees of ground vibration, depending on the construction procedures and the type of construction equipment used. The operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of the construction site often varies, depending on soil type, ground strata, and construction characteristics of the receptor buildings.

The Project would generate ground-borne construction vibration forces during building demolition and site excavation/grading activities when heavy construction equipment, such as large bulldozers/excavators and loaded trucks, would be used. The FTA has published standard vibration velocities levels for various construction equipment operations. It is noted that[21], pursuant to PDF-NOI-1, the Project construction would not use impact pile driving methods; therefore, impact pile driving vibration is not included in the on-site construction vibration analysis.

3.4.3.1 Building Damage

The City currently does not have any adopted standards, guidelines, or thresholds for assessing the significance of vibration impacts with respect to building damage. Therefore, the City utilizes criteria from the Federal Transit Administration (FTA) as threshold to assess the significance of impacts associated with potential building damage. [22]Table 15 (on page 31) provides the estimated vibration levels at the nearest off-site buildings. As indicated in Table 15, the estimated vibration velocity levels from construction equipment would be below the significance criteria at the nearest off-site buildings. Therefore, the on-site vibration impacts, pursuant to the significance criteria for building damage, during construction of the Project would be less than significant.

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[21] *FTA, "Transit Noise and Vibration Impact Assessment," September 2018. [Transit Noise and Vibration Impact Assessment Manual (dot.gov)]*

[22] *FTA, "Transit Noise and Vibration Impact Assessment," September 2018. [Transit Noise and Vibration Impact Assessment Manual (dot.gov)]*

Table 15. Construction Vibration Impacts – Building Damage

Receptor Location	Estimated Vibration Velocity Levels at the Off-Site Buildings, PPV,[a]					Significance Criteria, VdB	Sig. Impacts?
	Large Bulldozer	Caisson Drilling	Loaded Trucks	Jack-hammer	Small Bulldozer		
FTA Reference Vibration Levels at 25 feet	0.089	0.089	0.076	0.035	0.003	--	--
Single-story residential buildings to the North	0.037	0.037	0.032	0.015	0.001	0.3[b]	No
Single- and three-story residential buildings to the South	0.032	0.032	0.027	0.012	0.001	0.3[b]	No
Three-story residential building to the East	0.244	0.244	0.208	0.096	0.008	0.5[c]	No
Single- and two-story residential buildings to West	0.016	0.016	0.013	0.006	0.001	0.3[b]	No

[a] *Vibration level calculated based on FTA reference vibration level at a 25-foot distance. Detailed calculation worksheets, are included in Appendix B.*
[b] *FTA criteria for engineered concrete and masonry buildings.*
[c] *FTA criteria for reinforced concrete, steel or timber buildings.*
Source: FTA, 2018; AES, 2022

3.4.3.1 Human Annoyance

The City currently does not have any adopted standards, guidelines, or thresholds relative to vibration impacts with respect to human annoyance. Therefore, criteria from the Federal Transit Administration (FTA) are utilized as thresholds to assess impacts associated with potential human annoyance.[23] Per FTA guidance, the significance criterion for human annoyance is 72 VdB for sensitive uses, including residential, assuming there are a minimum of 70 vibration events occurring during a typical construction day.

Table 16 (on page 32) presents the estimated vibration velocity levels (in terms of VdB) due to construction equipment at the identified representative off-site vibration sensitive receptors. The estimated vibration levels at receptor R4 are provided for information only, as there are no applicable vibration criteria for the outdoor park use. To present a worst-case analysis, the estimated vibration levels were calculated with the construction equipment assumed to be operating at the closest distance to the off-site sensitive receptors. As indicated in Table 16, the estimated vibration levels due to on-site construction equipment would be below the significance threshold for human annoyance at off-site receptor location R5. However, the estimated vibration levels would exceed the significance thresholds at off-site receptor locations R1, R2 and R3. Therefore, human annoyance vibration impacts, pursuant to the

[23] *FTA, "Transit Noise and Vibration Impact Assessment," September 2018. Transit Noise and Vibration Impact Assessment Manual (dot.gov)*

significance criteria for human annoyance, due to on-site construction activities of the Project would be potentially significant without mitigation.

Table 16. Construction Vibration Impacts – Human Annoyance (Without Incorporation of Mitigation Measure MM-NOI-2)

Off-Site Receptor Location	Estimated Vibration Velocity Levels at the Nearest Off-Site Sensitive Receptors from the Project Construction Equipment,[a,b] VdB					Significance Criteria, VdB	Sig. Impacts?
	Large Bulldozer	Caisson Drilling	Loaded Trucks	Jack-hammer	Small Bulldozer		
R1	**79.3**	**79.3**	**78.3**	71.3	50.3	72	**Yes**
R2	**98. 9**	**98. 9**	**97.9**	**90.9**	69.9	72	**Yes**
R3	**78.0**	**78.0**	**77.0**	70.0	49.0	72	**Yes**
R4	57.0	57.0	56.0	49.0	28.0	n/a[c]	No
R5	71.1	71.1	70.1	63.1	42.1	72	No

[a] *Vibration levels calculated based on FTA reference vibration level at 25-foot distance.*
[b] ***Bold-faced** represents noise levels exceeded the significance* criteria.
[c] *Not applicable, as there are no applicable vibration criteria for outdoor spaces.*
Source: FTA, 2018; AES, 2022.

However, as discussed above, the Applicant has agreed to and the Project has incorporated Mitigation Measure MM-NOI-2. As reported in Table 17 (below), the Project's on-site construction vibration levels at receptor locations R1, R2, and R3 would be reduced to below the significance criteria with the incorporation of Mitigation Measure MM-NOI-2. Therefore, the Project's potential temporary on-site construction vibration impacts with respect to human annoyance would be less than significant.

Table 17. Construction Vibration Impacts – Human Annoyance (With Incorporation of Mitigation Measure MM-NOI-2)

Off-Site Receptor Location	Estimated Vibration Velocity Levels at the Nearest Off-Site Sensitive Receptors from the Project Construction Equipment,[a] VdB					Significance Threshold, VdB	Sig. Impacts?
	Large Bulldozer	Caisson Drilling	Loaded Trucks	Jack-hammer	Small Bulldozer		
R1	71.8	71.8	70.8	71	50.3	72	No
R2	71.8	71.8	70.8	71.3	69.9	72	No
R3	71.8	71.8	70.8	70.0	49.0	72	No
R4	57.0	57.0	56.0	49.0	28.0	n/a[b]	No
R5	71.1	71.1	70.1	63.1	42.1	72	No

[a] *Vibration levels calculated based on FTA reference vibration level at 25-foot distance.*
[b] *Not applicable, as there are no applicable vibration criteria for outdoor spaces.*
Source: FTA, 2018; AES, 2022.

Threshold (c): For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

3.4.4 Airport Noise

The nearest airport is the Hollywood-Burbank Airport, located approximately 7.1 miles northeast of the Project Site. Since the Project is not located within an airport land use plan, within two miles of a public airport or public use airport, or within the vicinity of a private airstrip, impacts with regard to airport-related noise would not occur. Therefore, no impacts with respect to Threshold (c) would occur.

4 REFERENCES

California Department of Transportation (Caltrans), *Technical Noise Supplement (TeNS),* September 2013.

California Governor's Office of Planning and Research, *State of California General Plan Guidelines,* 2017.

City of Los Angeles, *Municipal Code, Chapter XI Noise Regulation*.

City of Los Angeles, *Noise Element of the Los Angeles City General Plan,* Adopted February 2, 1999.

Cyril M. Harris, *Handbook of Acoustical Measurements and Noise Control,* Third Edition, 1991.

Federal Highway Administration (FHWA), *FHWA Roadway Construction Noise Model User's Guide*, January 2006.

Federal Transit Administration (FTA), *Transit Noise and Vibration Impact Assessment*, September 2018.

Overland Traffic Consultants, Inc., *Traffic Assessment for 1200 Cahuenga*, December 2021.

1200 Cahuenga Project

Noise Calculations Worksheets

Provided by Acoustical Engineering Services

Ambient Noise Measurements

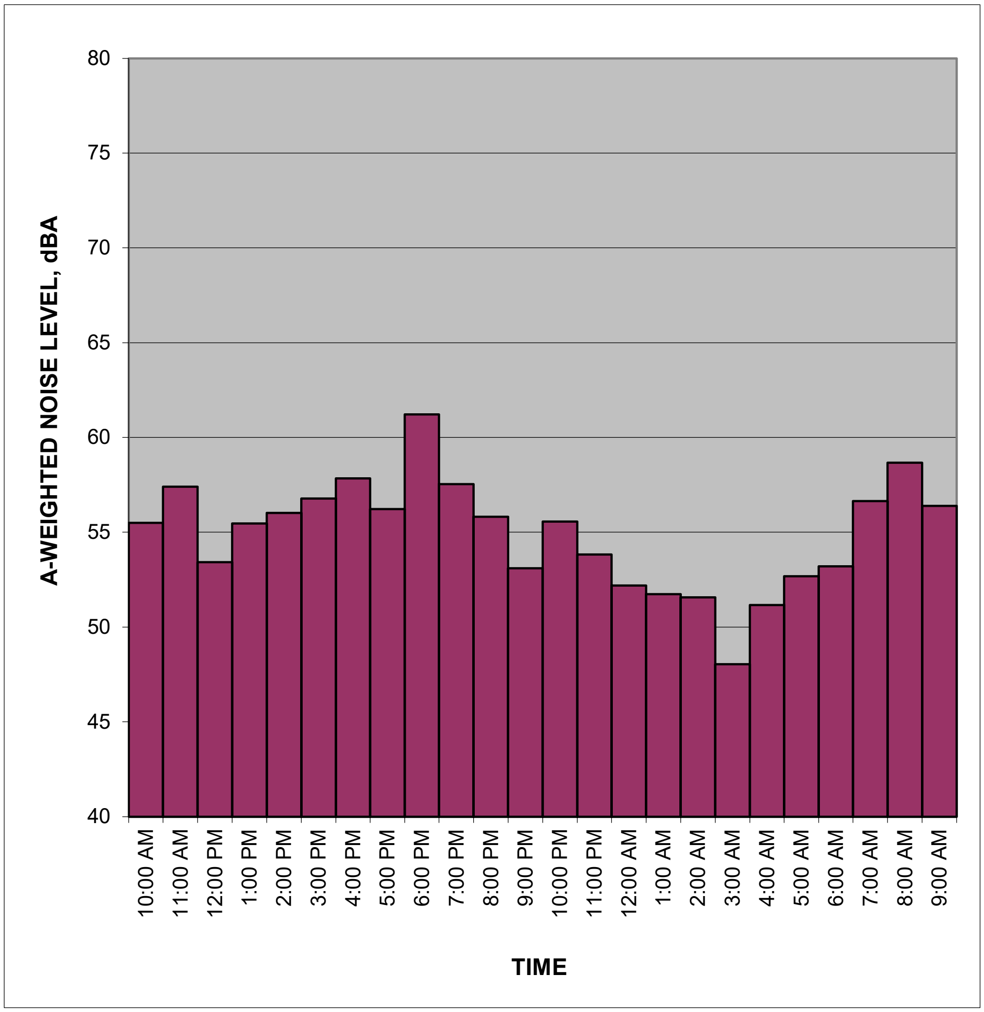
Measured Ambient Noise Levels

AES
ACOUSTICAL ENGINEERING SERVICES

Project: 1200 Cahuenga
Location: R2
Sources: Ambient

Date: 10/19 - 10/20/2022

TIME	HNL, dB(A)
10:00 AM	55.5
11:00 AM	57.4
12:00 PM	53.4
1:00 PM	55.5
2:00 PM	56.0
3:00 PM	56.8
4:00 PM	57.8
5:00 PM	56.2
6:00 PM	61.2
7:00 PM	57.5
8:00 PM	55.8
9:00 PM	53.1
10:00 PM	55.5
11:00 PM	53.8
12:00 AM	52.2
1:00 AM	51.7
2:00 AM	51.6
3:00 AM	48.0
4:00 AM	51.2
5:00 AM	52.7
6:00 AM	53.2
7:00 AM	56.6
8:00 AM	58.7
9:00 AM	56.4
CNEL, dB(A):	**60.4**



NOTES:

Daytime average	57.0	dBA Leq
Nighttime average	52.6	dBA Leq

AES
Acoustical Engineering Services

Location: R1
Date: 10/19/2022

Time	Leq
11:00:43 AM	47.1
11:00:53 AM	47.9
11:01:03 AM	48.5
11:01:13 AM	47.6
11:01:23 AM	53
11:01:33 AM	55.9
11:01:43 AM	56.3
11:01:53 AM	63.5
11:02:03 AM	62
11:02:13 AM	59.6
11:02:23 AM	58.6
11:02:33 AM	51
11:02:43 AM	52.5
11:02:53 AM	60.8
11:03:03 AM	49.9
11:03:13 AM	51.6
11:03:23 AM	56.8
11:03:33 AM	54.2
11:03:43 AM	54.7
11:03:53 AM	48.6
11:04:03 AM	50.5
11:04:13 AM	64.1
11:04:23 AM	55.6
11:04:33 AM	52.5
11:04:43 AM	53.6
11:04:53 AM	56.2
11:05:03 AM	48.8
11:05:13 AM	47.9
11:05:23 AM	54.7
11:05:33 AM	49.3
11:05:43 AM	52.2
11:05:53 AM	48.3
11:06:03 AM	50.4
11:06:13 AM	51.4
11:06:23 AM	59.6
11:06:33 AM	57.7
11:06:43 AM	50.3
11:06:53 AM	50.5
11:07:03 AM	51.4
11:07:13 AM	49.7
11:07:23 AM	55
11:07:33 AM	60.2
11:07:43 AM	71.3
11:07:53 AM	57.3

11:08:03 AM	52.4
11:08:13 AM	49.1
11:08:23 AM	55.9
11:08:33 AM	65.4
11:08:43 AM	54.7
11:08:53 AM	52
11:09:03 AM	51.7
11:09:13 AM	52.5
11:09:23 AM	54.3
11:09:33 AM	53.5
11:09:43 AM	50.2
11:09:53 AM	47.7
11:10:03 AM	51.7
11:10:13 AM	49.9
11:10:23 AM	56.4
11:10:33 AM	58.2
11:10:43 AM	65.6
11:10:53 AM	63.6
11:11:03 AM	55.6
11:11:13 AM	49.2
11:11:23 AM	46.8
11:11:33 AM	54.3
11:11:43 AM	54.3
11:11:53 AM	46
11:12:03 AM	57.8
11:12:13 AM	55.8
11:12:23 AM	55.2
11:12:33 AM	52.4
11:12:43 AM	50.6
11:12:53 AM	47.4
11:13:03 AM	51.3
11:13:13 AM	49.3
11:13:23 AM	52.5
11:13:33 AM	55.5
11:13:43 AM	55.3
11:13:53 AM	55.9
11:14:03 AM	50.8
11:14:13 AM	60.9
11:14:23 AM	57.2
11:14:33 AM	51.5
11:14:43 AM	50.4
11:14:53 AM	59.4
11:15:03 AM	50.9
11:15:13 AM	56.8
11:15:23 AM	58.9
11:15:33 AM	57
	57.8

ACOUSTICAL ENGINEERING SERVICES

Time	Leq
10:19:42 PM	55
10:19:52 PM	51.5
10:20:02 PM	52.3
10:20:12 PM	54.2
10:20:22 PM	55
10:20:32 PM	52.9
10:20:42 PM	52.8
10:20:52 PM	65.4
10:21:02 PM	65.3
10:21:12 PM	69.1
10:21:22 PM	57
10:21:32 PM	51.2
10:21:42 PM	53.2
10:21:52 PM	52.3
10:22:02 PM	50.7
10:22:12 PM	54.9
10:22:22 PM	55.9
10:22:32 PM	67.1
10:22:42 PM	63.3
10:22:52 PM	65.1
10:23:02 PM	52.7
10:23:12 PM	57.7
10:23:22 PM	55.1
10:23:32 PM	54.6
10:23:42 PM	52.1
10:23:52 PM	51.3
10:24:02 PM	50.6
10:24:12 PM	49.7
10:24:22 PM	57.9
10:24:32 PM	55.6
10:24:42 PM	50.7
10:24:52 PM	55.5
10:25:02 PM	68.4
10:25:12 PM	65.4
10:25:22 PM	56.1
10:25:32 PM	65.4
10:25:42 PM	55.7
10:25:52 PM	50.4
10:26:02 PM	50.6
10:26:12 PM	54
10:26:22 PM	57.8
10:26:32 PM	52.8
10:26:42 PM	50.5
10:26:52 PM	53.5
10:27:02 PM	56.1
10:27:12 PM	52.5
10:27:22 PM	49.3

10:27:32 PM	48.8
10:27:42 PM	50.6
10:27:52 PM	52.3
10:28:02 PM	52.1
10:28:12 PM	52.2
10:28:22 PM	53.9
10:28:32 PM	51.2
10:28:42 PM	52.2
10:28:52 PM	53.7
10:29:02 PM	51.7
10:29:12 PM	49.6
10:29:22 PM	49.9
10:29:32 PM	55
10:29:42 PM	53.6
10:29:52 PM	51.6
10:30:02 PM	62.4
10:30:12 PM	56.5
10:30:22 PM	54.6
10:30:32 PM	51.9
10:30:42 PM	49.4
10:30:52 PM	51.3
10:31:02 PM	49.5
10:31:12 PM	49.6
10:31:22 PM	52.9
10:31:32 PM	53.2
10:31:42 PM	51.4
10:31:52 PM	65.8
10:32:02 PM	62.8
10:32:12 PM	56.2
10:32:22 PM	63
10:32:32 PM	52.9
10:32:42 PM	49.2
10:32:52 PM	49.6
10:33:02 PM	49.3
10:33:12 PM	52.2
10:33:22 PM	60.7
10:33:32 PM	52.2
10:33:42 PM	61.8
10:33:52 PM	53.5
10:34:02 PM	52.2
10:34:12 PM	51.9
10:34:22 PM	57.7
10:34:32 PM	52.6
	58.8

AES
Acoustical Engineering Services

Project: 1200 Cahuenga
Location: R3
Date: 10/19/2022

Time	Leq
10:40:52 AM	53
10:41:02 AM	64
10:41:12 AM	71.3
10:41:22 AM	52.1
10:41:32 AM	55.8
10:41:42 AM	49.7
10:41:52 AM	45
10:42:02 AM	45.4
10:42:12 AM	50.3
10:42:22 AM	48.7
10:42:32 AM	52.5
10:42:42 AM	66.5
10:42:52 AM	61.3
10:43:02 AM	48.6
10:43:12 AM	44.5
10:43:22 AM	46.3
10:43:32 AM	50.6
10:43:42 AM	54
10:43:52 AM	54.3
10:44:02 AM	55.7
10:44:12 AM	49.8
10:44:22 AM	53
10:44:32 AM	53
10:44:42 AM	55.2
10:44:52 AM	52.3
10:45:02 AM	56.5
10:45:12 AM	63.4
10:45:22 AM	54.6
10:45:32 AM	54
10:45:42 AM	47.5
10:45:52 AM	46.6
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10:46:12 AM	49.4
10:46:22 AM	51.2
10:46:32 AM	53.2
10:46:42 AM	54.1
10:46:52 AM	57
10:47:02 AM	45.2
10:47:12 AM	45
10:47:22 AM	47.9
10:47:32 AM	49.8
10:47:42 AM	44.7
10:47:52 AM	43.6

10:48:02 AM	48.2
10:48:12 AM	54.9
10:48:22 AM	48.4
10:48:32 AM	51.8
10:48:42 AM	51.9
10:48:52 AM	53.9
10:49:02 AM	50.2
10:49:12 AM	50.6
10:49:22 AM	53.6
10:49:32 AM	46.8
10:49:42 AM	53.6
10:49:52 AM	54.3
10:50:02 AM	54.8
10:50:12 AM	50.5
10:50:22 AM	49.2
10:50:32 AM	53.2
10:50:42 AM	52.7
10:50:52 AM	52.6
10:51:02 AM	52.5
10:51:12 AM	48.1
10:51:22 AM	48.7
10:51:32 AM	54.6
10:51:42 AM	61.3
10:51:52 AM	50.3
10:52:02 AM	42.9
10:52:12 AM	47.1
10:52:22 AM	47.8
10:52:32 AM	51.2
10:52:42 AM	54.1
10:52:52 AM	52.7
10:53:02 AM	45.4
10:53:12 AM	45.6
10:53:22 AM	52
10:53:32 AM	56.1
10:53:42 AM	50.4
10:53:52 AM	48.3
10:54:02 AM	48
10:54:12 AM	53.1
10:54:22 AM	54.7
10:54:32 AM	53
10:54:42 AM	45.1
10:54:52 AM	46.8
10:55:02 AM	42.7
10:55:12 AM	43.7
10:55:22 AM	53.6
10:55:32 AM	60.8
10:55:42 AM	52.7
	56.4

Time	Leq
9:59:31 PM	52.4
9:59:41 PM	55.1
9:59:51 PM	49.4
10:00:01 PM	52.2
10:00:11 PM	54.7
10:00:21 PM	47.4
10:00:31 PM	47.4
10:00:41 PM	48.3
10:00:51 PM	51.1
10:01:01 PM	51.7
10:01:11 PM	49.7
10:01:21 PM	52.1
10:01:31 PM	50.8
10:01:41 PM	50.2
10:01:51 PM	47.7
10:02:01 PM	47.5
10:02:11 PM	51.1
10:02:21 PM	49
10:02:31 PM	52
10:02:41 PM	51.1
10:02:51 PM	51.2
10:03:01 PM	53
10:03:11 PM	52.1
10:03:21 PM	49.6
10:03:31 PM	48.5
10:03:41 PM	51.1
10:03:51 PM	49.6
10:04:01 PM	53.3
10:04:11 PM	51.2
10:04:21 PM	48.9
10:04:31 PM	49
10:04:41 PM	53.1
10:04:51 PM	51.7
10:05:01 PM	49.6
10:05:11 PM	49.5
10:05:21 PM	52.8
10:05:31 PM	53.1
10:05:41 PM	56.3
10:05:51 PM	57.1
10:06:01 PM	51.3
10:06:11 PM	53.1
10:06:21 PM	53.5
10:06:31 PM	54.3
10:06:41 PM	47
10:06:51 PM	47.4
10:07:01 PM	48.1

10:07:11 PM	53.9
10:07:21 PM	49.3
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10:13:01 PM	64.9
10:13:11 PM	54.6
10:13:21 PM	52.6
10:13:31 PM	50.9
10:13:41 PM	51.5
10:13:51 PM	50.1
10:14:01 PM	49.9
10:14:11 PM	50.5
10:14:21 PM	50
	55.2

AES
ACOUSTICAL ENGINEERING SERVICES

Project: 1200 Cahuenga
Location: R4
Date: 10/19/2022

Time	Leq
11:38:21 AM	52.6
11:38:31 AM	54.9
11:38:41 AM	64.8
11:38:51 AM	64.9
11:39:01 AM	67.4
11:39:11 AM	65.5
11:39:21 AM	63.5
11:39:31 AM	69.6
11:39:41 AM	75.5
11:39:51 AM	64.2
11:40:01 AM	60
11:40:11 AM	58.5
11:40:21 AM	59.8
11:40:31 AM	64.1
11:40:41 AM	66.7
11:40:51 AM	66.1
11:41:01 AM	61.6
11:41:11 AM	56.7
11:41:21 AM	65.2
11:41:31 AM	68.1
11:41:41 AM	65.9
11:41:51 AM	64.8
11:42:01 AM	62.9
11:42:11 AM	52.3
11:42:21 AM	57
11:42:31 AM	65.6
11:42:41 AM	54.8
11:42:51 AM	53.4
11:43:01 AM	53.5
11:43:11 AM	53.6
11:43:21 AM	53.7
11:43:31 AM	68
11:43:41 AM	71.3
11:43:51 AM	68.5
11:44:01 AM	64.9
11:44:11 AM	56.5
11:44:21 AM	58.4
11:44:31 AM	56.7
11:44:41 AM	62.5
11:44:51 AM	64.9
11:45:01 AM	59.5
11:45:11 AM	62.5
11:45:21 AM	63.8

11:45:31 AM	64.8
11:45:41 AM	64.6
11:45:51 AM	69.6
11:46:01 AM	56.1
11:46:11 AM	58
11:46:21 AM	61.2
11:46:31 AM	67.7
11:46:41 AM	69.5
11:46:51 AM	58.4
11:47:01 AM	54.5
11:47:11 AM	64.5
11:47:21 AM	59.2
11:47:31 AM	66.5
11:47:41 AM	67.6
11:47:51 AM	65.5
11:48:01 AM	65.6
11:48:11 AM	65.5
11:48:21 AM	69
11:48:31 AM	67.4
11:48:41 AM	60.6
11:48:51 AM	60.1
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11:49:21 AM	60.7
11:49:31 AM	68.8
11:49:41 AM	69.1
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11:50:41 AM	57
11:50:51 AM	58.6
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11:51:11 AM	60.7
11:51:21 AM	55.7
11:51:31 AM	64.9
11:51:41 AM	65.8
11:51:51 AM	67.9
11:52:01 AM	60.5
11:52:11 AM	64.9
11:52:21 AM	65.7
11:52:31 AM	64
11:52:41 AM	61.8
11:52:51 AM	64
11:53:01 AM	60.3
11:53:11 AM	60.7
	64.9

AES
ACOUSTICAL ENGINEERING SERVICES

Time	Leq
10:57:36 PM	53.4
10:57:46 PM	61.5
10:57:56 PM	62
10:58:06 PM	64.6
10:58:16 PM	56.1
10:58:26 PM	66.4
10:58:36 PM	70.2
10:58:46 PM	65.9
10:58:56 PM	62.6
10:59:06 PM	59.1
10:59:16 PM	54.8
10:59:26 PM	60.7
10:59:36 PM	61.9
10:59:46 PM	66.5
10:59:56 PM	61.7
11:00:06 PM	64.6
11:00:16 PM	59.4
11:00:26 PM	60.6
11:00:36 PM	64.3
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11:00:56 PM	50.8
11:01:06 PM	51.9
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11:01:26 PM	58.3
11:01:36 PM	62.6
11:01:46 PM	62.1
11:01:56 PM	55.8
11:02:06 PM	58.1
11:02:16 PM	52.9
11:02:26 PM	51.7
11:02:36 PM	51.6
11:02:46 PM	52.6
11:02:56 PM	52.3
11:03:06 PM	61.7
11:03:16 PM	53.8
11:03:26 PM	53
11:03:36 PM	52.4
11:03:46 PM	52.5
11:03:56 PM	50.7
11:04:06 PM	50.2
11:04:16 PM	51.6
11:04:26 PM	64
11:04:36 PM	65.5
11:04:46 PM	52.1
11:04:56 PM	57.7
11:05:06 PM	63.8

11:05:16 PM	55
11:05:26 PM	56.3
11:05:36 PM	56.6
11:05:46 PM	52.5
11:05:56 PM	62.6
11:06:06 PM	59.4
11:06:16 PM	54.8
11:06:26 PM	61
11:06:36 PM	65.3
11:06:46 PM	59.8
11:06:56 PM	52.4
11:07:06 PM	51.9
11:07:16 PM	55.5
11:07:26 PM	58.6
11:07:36 PM	58.3
11:07:46 PM	51.2
11:07:56 PM	56.5
11:08:06 PM	58
11:08:16 PM	53.9
11:08:26 PM	58.5
11:08:36 PM	59.6
11:08:46 PM	51.3
11:08:56 PM	51.4
11:09:06 PM	51.7
11:09:16 PM	54.1
11:09:26 PM	58.5
11:09:36 PM	61.9
11:09:46 PM	64
11:09:56 PM	62.6
11:10:06 PM	57.5
11:10:16 PM	59.1
11:10:26 PM	57
11:10:36 PM	63.1
11:10:46 PM	56.1
11:10:56 PM	55.6
11:11:06 PM	58.5
11:11:16 PM	52.1
11:11:26 PM	57.9
11:11:36 PM	63.8
11:11:46 PM	50.9
11:11:56 PM	57.6
11:12:06 PM	51.7
11:12:16 PM	50.9
11:12:26 PM	59.7
	60.3

AES
Acoustical Engineering Services

Project: 1200 Cahuenga
Location: R5
Date: 10/19/2022

Time	Leq
11:19:06 AM	52
11:19:16 AM	61.2
11:19:26 AM	68.4
11:19:36 AM	72.4
11:19:46 AM	66.6
11:19:56 AM	62.6
11:20:06 AM	65.1
11:20:16 AM	62.8
11:20:26 AM	65.3
11:20:36 AM	61.2
11:20:46 AM	54.7
11:20:56 AM	56.8
11:21:06 AM	51.9
11:21:16 AM	64.1
11:21:26 AM	70.5
11:21:36 AM	67.8
11:21:46 AM	66
11:21:56 AM	58.8
11:22:06 AM	53.6
11:22:16 AM	67.1
11:22:26 AM	71.1
11:22:36 AM	63.9
11:22:46 AM	65.8
11:22:56 AM	64
11:23:06 AM	64.6
11:23:16 AM	56.7
11:23:26 AM	64.1
11:23:36 AM	71
11:23:46 AM	76
11:23:56 AM	58.4
11:24:06 AM	63.9
11:24:16 AM	64.9
11:24:26 AM	67.7
11:24:36 AM	61.6
11:24:46 AM	60.3
11:24:56 AM	56.3
11:25:06 AM	57.1
11:25:16 AM	62.6
11:25:26 AM	71.5
11:25:36 AM	73.5
11:25:46 AM	65.8
11:25:56 AM	63.1
11:26:06 AM	54.1

11:26:16 AM	64.4
11:26:26 AM	52.7
11:26:36 AM	54.3
11:26:46 AM	65.2
11:26:56 AM	52.4
11:27:06 AM	62
11:27:16 AM	66.7
11:27:26 AM	79.7
11:27:36 AM	69.1
11:27:46 AM	59.8
11:27:56 AM	55.9
11:28:06 AM	50.5
11:28:16 AM	61.2
11:28:26 AM	70.6
11:28:36 AM	68
11:28:46 AM	70.1
11:28:56 AM	64.1
11:29:06 AM	54.4
11:29:16 AM	64.2
11:29:26 AM	66.9
11:29:36 AM	63.9
11:29:46 AM	66.9
11:29:56 AM	64.2
11:30:06 AM	58
11:30:16 AM	65.2
11:30:26 AM	71.1
11:30:36 AM	68.8
11:30:46 AM	66.7
11:30:56 AM	59.1
11:31:06 AM	65.5
11:31:16 AM	62.8
11:31:26 AM	70.5
11:31:36 AM	79.1
11:31:46 AM	76.2
11:31:56 AM	62.2
11:32:06 AM	56.3
11:32:16 AM	61.1
11:32:26 AM	67.1
11:32:36 AM	71.4
11:32:46 AM	62.6
11:32:56 AM	53.1
11:33:06 AM	63.3
11:33:16 AM	68
11:33:26 AM	69.5
11:33:36 AM	68.5
11:33:46 AM	61.8
11:33:56 AM	59.7
	68.3

Time	Leq
10:38:48 PM	60.2
10:38:58 PM	53.4
10:39:08 PM	62.3
10:39:18 PM	51.8
10:39:28 PM	58.2
10:39:38 PM	66.5
10:39:48 PM	52.8
10:39:58 PM	54.5
10:40:08 PM	68.6
10:40:18 PM	54.9
10:40:28 PM	62.6
10:40:38 PM	55
10:40:48 PM	63.4
10:40:58 PM	57.2
10:41:08 PM	59.3
10:41:18 PM	68.2
10:41:28 PM	70.3
10:41:38 PM	62.2
10:41:48 PM	60.5
10:41:58 PM	62.9
10:42:08 PM	63.9
10:42:18 PM	65.1
10:42:28 PM	62
10:42:38 PM	68.8
10:42:48 PM	59.6
10:42:58 PM	61.4
10:43:08 PM	54.6
10:43:18 PM	61.1
10:43:28 PM	66.8
10:43:38 PM	59.1
10:43:48 PM	61.6
10:43:58 PM	61.2
10:44:08 PM	63.5
10:44:18 PM	63.5
10:44:28 PM	58.4
10:44:38 PM	57.8
10:44:48 PM	65.6
10:44:58 PM	51.6
10:45:08 PM	49.7
10:45:18 PM	53.3
10:45:28 PM	62.1
10:45:38 PM	55
10:45:48 PM	62.6
10:45:58 PM	58.3
10:46:08 PM	60.2
10:46:18 PM	66.1

AES
Acoustical Engineering Services

10:46:28 PM	67.8
10:46:38 PM	58.7
10:46:48 PM	62.6
10:46:58 PM	55.8
10:47:08 PM	59
10:47:18 PM	59.8
10:47:28 PM	64.4
10:47:38 PM	51.4
10:47:48 PM	50.8
10:47:58 PM	50.4
10:48:08 PM	49.6
10:48:18 PM	62.3
10:48:28 PM	67
10:48:38 PM	59.6
10:48:48 PM	55.7
10:48:58 PM	56
10:49:08 PM	65
10:49:18 PM	65.6
10:49:28 PM	65.5
10:49:38 PM	66.2
10:49:48 PM	61.6
10:49:58 PM	57.8
10:50:08 PM	65.3
10:50:18 PM	60.2
10:50:28 PM	64
10:50:38 PM	57.2
10:50:48 PM	58.3
10:50:58 PM	60.3
10:51:08 PM	64.3
10:51:18 PM	59
10:51:28 PM	63.3
10:51:38 PM	65.9
10:51:48 PM	64.4
10:51:58 PM	57.9
10:52:08 PM	61.2
10:52:18 PM	62.8
10:52:28 PM	63.1
10:52:38 PM	57.7
10:52:48 PM	66.2
10:52:58 PM	61.2
10:53:08 PM	62.4
10:53:18 PM	61
10:53:28 PM	65.3
10:53:38 PM	52.8
	62.8

Construction Noise & Vibration Calculations

AES
ACOUSTICAL ENGINEERING SERVICES

Project: 1200 Cahuenga Project

Construction Phase: ***Demolition***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	35	0
Rubber Tired Dozer	1	82	40%	60	0
Concrete/Industrial Saws	1	90	20%	60	0
Tractors/Loaders/Backhoes	1	84	40%	85	0
Tractors/Loaders/Backhoes	1	84	40%	85	0
	5				

Receptor: ***R1***

Results:

1-hour Leq: 86.6

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: 1200 Cahuenga Project

Construction Phase: ***Grading***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Graders	1	85	40%	35	0
Rubber Tired Dozer	1	82	40%	60	0
Tractors/Loaders/Backhoes	1	84	40%	60	0
Tractors/Loaders/Backhoes	1	84	40%	85	0
	4				

Receptor: ***R1***

Results:

1-hour Leq: 86.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

A E S
ACOUSTICAL ENGINEERING SERVICES

Project: 1200 Cahuenga Project

Construction Phase: ***Building Construction***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cranes	1	81	16%	35	0
Forklifts	1	76	40%	60	0
Generator Set	1	81	50%	60	0
Tractors/Loaders/Backhoes	1	79	40%	85	0
Welders	1	74	40%	85	0
Tractors/Loaders/Backhoes	1	79	40%	110	0
Tractors/Loaders/Backhoes	1	79	40%	110	0
	7				

Receptor: ***R1***

Results:

1-hour Leq: 80.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: 1200 Cahuenga Project

Construction Phase: ***Paving***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixers	1	80	50%	35	0
Pavers	1	77	50%	60	0
Paving Equipment	1	77	50%	60	0
Rollers	1	80	20%	85	0
Tractors/Loaders/Backhoes	1	79	40%	85	0
	5				

Receptor: ***R1***

Results:

1-hour Leq: 81.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

A E S
ACOUSTICAL ENGINEERING SERVICES

Project: 1200 Cahuenga Project

Construction Phase: ***Architectural Coating***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Air Compressors	1	78	40%	35	0
	1				

Receptor: ***R1***

Results:

1-hour Leq: 77.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

A E S
ACOUSTICAL ENGINEERING SERVICES

Project: 1200 Cahuenga Project

Construction Phase: ***Demolition***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	25	0
Rubber Tired Dozer	1	82	40%	50	0
Concrete/Industrial Saws	1	90	20%	50	0
Tractors/Loaders/Backhoes	1	84	40%	75	0
Tractors/Loaders/Backhoes	1	84	40%	75	0
	5				

Receptor: ***R2***

Results:

1-hour Leq: 88.8

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: 1200 Cahuenga Project

Construction Phase: ***Grading***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Graders	1	85	40%	25	0
Rubber Tired Dozer	1	82	40%	50	0
Tractors/Loaders/Backhoes	1	84	40%	50	0
Tractors/Loaders/Backhoes	1	84	40%	75	0
	4				

Receptor: ***R2***

Results:

1-hour Leq: 88.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

A E S
ACOUSTICAL ENGINEERING SERVICES

Project: 1200 Cahuenga Project

Construction Phase: ***Building Construction***

Equipment

Description	**No. of Equip.**	**Reference Noise Level at 50ft, Lmax**	**Acoustical Usage Factor**	**Distance to Receptor, ft**	**Estimated Noise Shielding, dBA**
Cranes	1	81	16%	25	0
Forklifts	1	76	40%	50	0
Generator Set	1	81	50%	50	0
Tractors/Loaders/Backhoes	1	79	40%	75	0
Welders	1	74	40%	75	0
Tractors/Loaders/Backhoes	1	79	40%	100	0
Tractors/Loaders/Backhoes	1	79	40%	100	0
	7				

Receptor: ***R2***

Results:

1-hour Leq: 82.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: 1200 Cahuenga Project

Construction Phase: ***Paving***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixers	1	80	50%	25	0
Pavers	1	77	50%	50	0
Paving Equipment	1	77	50%	50	0
Rollers	1	80	20%	75	0
Tractors/Loaders/Backhoes	1	79	40%	75	0
	5				

Receptor: ***R2***

Results:

1-hour Leq: 84.4

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: 1200 Cahuenga Project

Construction Phase: ***Architectural Coating***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Air Compressors	1	78	40%	25	0
	1				

Receptor: ***R2***

Results:

1-hour Leq: 80.0

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
Acoustical Engineering Services

Project: 1200 Cahuenga Project

Construction Phase: ***Demolition***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	50	0
Rubber Tired Dozer	1	82	40%	50	0
Concrete/Industrial Saws	1	90	20%	75	0
Tractors/Loaders/Backhoes	1	84	40%	75	0
Tractors/Loaders/Backhoes	1	84	40%	100	0
	5				

Receptor: ***R3***

Results:

1-hour Leq: 85.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: 1200 Cahuenga Project

Construction Phase: ***Grading***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Graders	1	85	40%	50	0
Rubber Tired Dozer	1	82	40%	50	0
Tractors/Loaders/Backhoes	1	84	40%	75	0
Tractors/Loaders/Backhoes	1	84	40%	75	0
	4				

Receptor: ***R3***

Results:

1-hour Leq: 84.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

ACOUSTICAL ENGINEERING SERVICES

Project: 1200 Cahuenga Project

Construction Phase: ***Building Construction***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cranes	1	81	16%	50	0
Forklifts	1	76	40%	50	0
Generator Set	1	81	50%	75	0
Tractors/Loaders/Backhoes	1	79	40%	75	0
Welders	1	74	40%	100	0
Tractors/Loaders/Backhoes	1	79	40%	100	0
Tractors/Loaders/Backhoes	1	79	40%	125	0
	7				

Receptor: ***R3***

Results:

1-hour Leq: 79.7

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: 1200 Cahuenga Project

Construction Phase: ***Paving***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixers	1	80	50%	50	0
Pavers	1	77	50%	50	0
Paving Equipment	1	77	50%	75	0
Rollers	1	80	20%	75	0
Tractors/Loaders/Backhoes	1	79	40%	100	0
	5				

Receptor: ***R3***

Results:

1-hour Leq: 80.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

11/4/2022

AES
ACOUSTICAL ENGINEERING SERVICES

Project: 1200 Cahuenga Project

Construction Phase: ***Architectural Coating***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Air Compressors	1	78	40%	50	0
	1				

Receptor: ***R3***

Results:

1-hour Leq: 74.0

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: 1200 Cahuenga Project

Construction Phase: ***Demolition***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	250	0
Rubber Tired Dozer	1	82	40%	250	0
Concrete/Industrial Saws	1	90	20%	275	0
Tractors/Loaders/Backhoes	1	84	40%	275	0
Tractors/Loaders/Backhoes	1	84	40%	300	0
	5				

Receptor: ***R4***

Results:

1-hour Leq: 72.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: 1200 Cahuenga Project

Construction Phase: ***Grading***

Equipment

Description	**No. of Equip.**	**Reference Noise Level at 50ft, Lmax**	**Acoustical Usage Factor**	**Distance to Receptor, ft**	**Estimated Noise Shielding, dBA**
Graders	1	85	40%	250	0
Rubber Tired Dozer	1	82	40%	250	0
Tractors/Loaders/Backhoes	1	84	40%	275	0
Tractors/Loaders/Backhoes	1	84	40%	275	0
	4				

Receptor: ***R4***

Results:

1-hour Leq: 71.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

A E S
ACOUSTICAL ENGINEERING SERVICES

Project: 1200 Cahuenga Project

Construction Phase: ***Building Construction***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cranes	1	81	16%	250	0
Forklifts	1	76	40%	250	0
Generator Set	1	81	50%	275	0
Tractors/Loaders/Backhoes	1	79	40%	275	0
Welders	1	74	40%	300	0
Tractors/Loaders/Backhoes	1	79	40%	300	0
Tractors/Loaders/Backhoes	1	79	40%	325	0
	7				

Receptor: ***R4***

Results:

1-hour Leq: 68.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: 1200 Cahuenga Project

Construction Phase: ***Paving***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixers	1	80	50%	250	0
Pavers	1	77	50%	250	0
Paving Equipment	1	77	50%	275	0
Rollers	1	80	20%	275	0
Tractors/Loaders/Backhoes	1	79	40%	300	0
	5				

Receptor: ***R4***

Results:

1-hour Leq: 67.3

Source for Ref. Noise Levels: FHWA RCNM, 2006

A E S
ACOUSTICAL ENGINEERING SERVICES

Project: 1200 Cahuenga Project

Construction Phase: ***Architectural Coating***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Air Compressors	1	78	40%	250	0
	1				

Receptor: ***R4***

Results:

1-hour Leq: 60.0

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: 1200 Cahuenga Project

Construction Phase: ***Demolition***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	80	0
Rubber Tired Dozer	1	82	40%	80	0
Concrete/Industrial Saws	1	90	20%	105	0
Tractors/Loaders/Backhoes	1	84	40%	105	0
Tractors/Loaders/Backhoes	1	84	40%	130	0
	5				

Receptor: ***R5***

Results:

1-hour Leq: 81.7

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: 1200 Cahuenga Project

Construction Phase: ***Grading***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Graders	1	85	40%	80	0
Rubber Tired Dozer	1	82	40%	80	0
Tractors/Loaders/Backhoes	1	84	40%	105	0
Tractors/Loaders/Backhoes	1	84	40%	105	0
	4				

Receptor: ***R5***

Results:

1-hour Leq: 80.8

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: 1200 Cahuenga Project

Construction Phase: ***Building Construction***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cranes	1	81	16%	80	0
Forklifts	1	76	40%	80	0
Generator Set	1	81	50%	105	0
Tractors/Loaders/Backhoes	1	79	40%	105	0
Welders	1	74	40%	130	0
Tractors/Loaders/Backhoes	1	79	40%	130	0
Tractors/Loaders/Backhoes	1	79	40%	155	0
	7				

Receptor: ***R5***

Results:

1-hour Leq: 76.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: 1200 Cahuenga Project

Construction Phase: ***Paving***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixers	1	80	50%	80	0
Pavers	1	77	50%	80	0
Paving Equipment	1	77	50%	105	0
Rollers	1	80	20%	105	0
Tractors/Loaders/Backhoes	1	79	40%	130	0
	5				

Receptor: ***R5***

Results:

1-hour Leq: 76.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: 1200 Cahuenga Project

Construction Phase: ***Architectural Coating***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Air Compressors	1	78	40%	80	0
	1				

Receptor: ***R5***

Results:

1-hour Leq: 69.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: 1200 Cahuenga Project

Off-Site Haul Trucks

Phase	Maximum Number of Truck One Way Trips			Estimated Noise Levels, dBA	
	Per Day	Per Hour (8-hr day)		Cahuenga	Santa Monica
1. Export	80	14		60.3	60.3
2. Concrete	80	10		58.8	58.8
3. Delivery	16	2		51.8	51.8
6 hrs for export			Ambient, dBA	64.9	64.9
8hrs for other phases			Significance Criteria, dBA	69.9	69.9

	Project + Ambient Noise Levels, dBA			Noise Increase over Ambient, dBA	
	Cahuenga	Santa Monica		Cahuenga	Santa Monica
1. Export	66.2	66.2		1.3	1.3
2. Concrete	65.9	65.9		1.0	1.0
3. Delivery	65.1	65.1		0.2	0.2
			Maximum Noise Increase	1.3	1.3
			Significant Noise Impact?	No	No

EcoTierra 2 December 2022
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: 1200 Cahuenga Project
RUN: Construction - Export

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway		Points					Flow Control			Segment	
Name	Width	Name	No.	Coordinates (pavement) X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	50	Average	
		point2	2	1,000.0	0.0	0.00					

EcoTierra			**2 December 2022**										
Sean Bui			**TNM 2.5**										
INPUT: TRAFFIC FOR LAeq1h Volumes													
PROJECT/CONTRACT:	**1200 Cahuenga Project**												
RUN:	**Construction - Export**												
Roadway	**Points**												
Name	**Name**	**No.**	**Segment**										
			Autos		**MTrucks**		**HTrucks**		**Buses**		**Motorcycles**		
			V	**S**	**V**	**S**	**V**	**S**	**V**	**S**	**V**	**S**	
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	
Haul Route	point1	1	0	0	0	0	14	35	0	0	0	0	
	point2	2											

EcoTierra						**2 December 2022**					
Sean Bui						**TNM 2.5**					
INPUT: RECEIVERS											
PROJECT/CONTRACT:	**1200 Cahuenga Project**										
RUN:	**Construction - Export**										
Receiver											
Name	**No.**	**#DUs**	**Coordinates (ground)**			**Height**	**Input Sound Levels and Criteria**				**Active**
			X	**Y**	**Z**	**above**	**Existing**	**Impact Criteria**		**NR**	**in**
						Ground	**LAeq1h**	**LAeq1h**	**Sub'l**	**Goal**	**Calc.**
			ft	ft	ft	ft	dBA	dBA	dB	dB	
Along Cahuenga and Santa Monica	1	1	500.0	45.0	0.00	4.92	0.00	71	5.0	0.0	Y

EcoTierra				**2 December 2022**					
Sean Bui				**TNM 2.5**					
				Calculated with TNM 2.5					
RESULTS: SOUND LEVELS									
PROJECT/CONTRACT:	**1200 Cahuenga Project**								
RUN:	**Construction - Export**								
BARRIER DESIGN:	**INPUT HEIGHTS**			**Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.**					
ATMOSPHERICS:	**68 deg F, 50% RH**								

Receiver													
Name	**No.**	**#DUs**	**Existing**	**No Barrier**						**With Barrier**			
			LAeq1h	**LAeq1h**		**Increase over existing**		**Type**		**Calculated**	**Noise Reduction**		
				Calculated	**Crit'n**	**Calculated**	**Crit'n Sub'l Inc**	**Impact**		**LAeq1h**	**Calculated**	**Goal**	**Calculated minus Goal**
			dBA	dBA	dBA	dB	dB			dBA	dB	dB	dB
Along Cahuenga and Santa Monica	1	1	0.0	60.3	71	60.3	5	----		60.3	0.0	0	0.0

Dwelling Units	**# DUs**	**Noise Reduction**		
		Min	**Avg**	**Max**
		dB	**dB**	**dB**
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

EcoTierra					2 December 2022							
Sean Bui					TNM 2.5							
INPUT: ROADWAYS							Average pavement type shall be used unless					
PROJECT/CONTRACT:	1200 Cahuenga Project						a State highway agency substantiates the use					
RUN:	Construction - Concrete Pour						of a different type with the approval of FHWA					
Roadway		Points										
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment		
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?	
	ft			ft	ft	ft		mph	%			
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	50	Average		
		point2	2	1,000.0	0.0	0.00						

EcoTierra			**2 December 2022**										
Sean Bui			**TNM 2.5**										
INPUT: TRAFFIC FOR LAeq1h Volumes													
PROJECT/CONTRACT:	**1200 Cahuenga Project**												
RUN:	**Construction - Concrete Pour**												
Roadway	**Points**												
Name	**Name**	**No.**	**Segment**										
			Autos		**MTrucks**		**HTrucks**		**Buses**		**Motorcycles**		
			V	**S**	**V**	**S**	**V**	**S**	**V**	**S**	**V**	**S**	
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	
Haul Route	point1	1	0	0	0	0	10	35	0	0	0	0	
	point2	2											

EcoTierra						**2 December 2022**						
Sean Bui						**TNM 2.5**						
INPUT: RECEIVERS												
PROJECT/CONTRACT:	**1200 Cahuenga Project**											
RUN:	**Construction - Concrete Pour**											
Receiver												
Name	**No.**	**#DUs**	**Coordinates (ground)**			**Height**	**Input Sound Levels and Criteria**					**Active**
			X	**Y**	**Z**	**above**	**Existing**	**Impact Criteria**			**NR**	**in**
						Ground	**LAeq1h**	**LAeq1h**	**Sub'l**		**Goal**	**Calc.**
			ft	ft	ft	ft	dBA	dBA	dB		dB	
Along Cahuenga and Santa Monica	1	1	500.0	45.0	0.00	4.92	0.00	71	5.0		0.0	Y

EcoTierra						**2 December 2022**						
Sean Bui						**TNM 2.5**						
						Calculated with TNM 2.5						
RESULTS: SOUND LEVELS												
PROJECT/CONTRACT:		**1200 Cahuenga Project**										
RUN:		**Construction - Concrete Pour**										
BARRIER DESIGN:		**INPUT HEIGHTS**					**Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.**					
ATMOSPHERICS:		**68 deg F, 50% RH**										
Receiver												
Name	**No.**	**#DUs**	**Existing**	**No Barrier**						**With Barrier**		
			LAeq1h	**LAeq1h**		**Increase over existing**		**Type**	**Calculated**	**Noise Reduction**		
				Calculated	**Crit'n**	**Calculated**	**Crit'n Sub'l Inc**	**Impact**	**LAeq1h**	**Calculated**	**Goal**	**Calculated minus Goal**
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Along Cahuenga and Santa Monica	1	1	0.0	58.8	71	58.8	5	----	58.8	0.0	0	0.0

Dwelling Units	**# DUs**	**Noise Reduction**		
		Min	**Avg**	**Max**
		dB	**dB**	**dB**
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

EcoTierra					**2 December 2022**							
Sean Bui					**TNM 2.5**							
INPUT: ROADWAYS							**Average pavement type shall be used unless**					
PROJECT/CONTRACT:	**1200 Cahuenga Project**						**a State highway agency substantiates the use**					
RUN:	**Construction - Delivery**						**of a different type with the approval of FHWA**					
Roadway		**Points**										
Name	**Width**	**Name**	**No.**	**Coordinates (pavement)**			**Flow Control**			**Segment**		
				X	**Y**	**Z**	**Control Device**	**Speed Constraint**	**Percent Vehicles Affected**	**Pvmt Type**	**On Struct?**	
	ft			ft	ft	ft		mph	%			
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	50	Average		
		point2	2	1,000.0	0.0	0.00						

EcoTierra 2 December 2022
Sean Bui TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: 1200 Cahuenga Project
RUN: Construction - Delivery

Roadway	Points												
Name	Name	No.	Segment										
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	0	0	0	0	2	35	0	0	0	0
	point2	2										

EcoTierra						**2 December 2022**					
Sean Bui						**TNM 2.5**					
INPUT: RECEIVERS											
PROJECT/CONTRACT:	**1200 Cahuenga Project**										
RUN:	**Construction - Delivery**										
Receiver											
Name	**No.**	**#DUs**	**Coordinates (ground)**			**Height**	**Input Sound Levels and Criteria**				**Active**
			X	**Y**	**Z**	**above**	**Existing**	**Impact Criteria**		**NR**	**in**
						Ground	**LAeq1h**	**LAeq1h**	**Sub'l**	**Goal**	**Calc.**
			ft	ft	ft	ft	dBA	dBA	dB	dB	
Along Cahuenga and Santa Monica	1	1	500.0	45.0	0.00	4.92	0.00	71	5.0	0.0	Y

EcoTierra		2 December 2022
Sean Bui		TNM 2.5
		Calculated with TNM 2.5
RESULTS: SOUND LEVELS		
PROJECT/CONTRACT:	1200 Cahuenga Project	
RUN:	Construction - Delivery	
BARRIER DESIGN:	INPUT HEIGHTS	Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.
ATMOSPHERICS:	68 deg F, 50% RH	

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Along Cahuenga and Santa Monica	1	1	0.0	51.8	71	51.8	5	----	51.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

Project: 1200 Cahuenga Project

Construction Vibration Impacts

Reference Levels at 25 feet are based on FTA, 2006 (Transit Noise and Vibration Impact Assessment)
Calculations using FTA procedure with n= **1.5** (for receptors 25 feet or greater)
n= **1.1** (for receptors less than 25 feet, per Caltrans procedure)

ON-SITE CONSTRUCTION ACTIVITIES

Table 1: Construction Equipment Vibration Levels (PPV) - Building Damage

Equipment	Reference Vibration Levels at 25 ft., PPV	Estimated Vibration Levels at nearest off-site building structures, distance in feet, PPV									
		One-Story Buildings to the North		1- and 3-Story Buildings to the South		3-Story Building to the East		1- and 2-Story Buildings to the West			
		Distance	Level	Distance	Level	Distance	Level	Distance	Level		
Large Bulldozer	0.089	45	0.037	50	0.032	10	0.244	80	0.016		
Caisson Drilling	0.089	45	0.037	50	0.032	10	0.244	80	0.016		
Loaded Trucks	0.076	45	0.032	50	0.027	10	0.208	80	0.013		
Jackhammer	0.035	45	0.015	50	0.012	10	0.096	80	0.006		
Small bulldozer	0.003	45	0.001	50	0.001	10	0.008	80	0.001		

Table 2a: Construction Equipment Vibration Levels (VdB) - Human Annoyance - Without Mitigation Measure MM-NOI-2

Equipment	Reference Vibration Levels at 25 ft., VdB	Estimated Vibration Levels at Off-Site Receptors (at note distance in feet), VdB									
		R1		R2		R3		R4		R5	
		Distance	Level	Distance	Level	Distance	Level	Distance	Level	Distance	Level
Large Bulldozer	87	45	79.3	10	98.9	50	78.0	250	57.0	85	71.1
Caisson Drilling	87	45	79.3	10	98.9	50	78.0	250	57.0	85	71.1
Loaded Trucks	86	45	78.3	10	97.9	50	77.0	250	56.0	85	70.1
Jackhammer	79	45	71.3	10	90.9	50	70.0	250	49.0	85	63.1
Small bulldozer	58	45	50.3	10	69.9	50	49.0	250	28.0	85	42.1

Table 2b: Construction Equipment Vibration Levels (VdB) - Human Annoyance - With Mitigation Measure MM-NOI-2

Equipment	Reference Vibration Levels at 25 ft., VdB	Estimated Vibration Levels at Off-Site Receptors (at note distance in feet), VdB									
		R1		R2		R3		R4		R5	
		Distance	Level	Distance	Level	Distance	Level	Distance	Level	Distance	Level
Large Bulldozer	87	80	71.8	80	71.8	80	71.8	250	57.0	85	71.1
Caisson Drilling	87	80	71.8	80	71.8	80	71.8	250	57.0	85	71.1
Loaded Trucks	86	80	70.8	80	70.8	80	70.8	250	56.0	85	70.1
Jackhammer	79	45	71.3	45	71.3	50	70.0	250	49.0	85	63.1
Small bulldozer	58	45	50.3	10	66.9	50	49.0	250	28.0	85	42.1

Operation Noise Calculations

Project Composite Noise Calculations (CNEL)

Project: 1200 Cahuenga

Receptor	Ambient	Traffic[a]	Mechanical	Parking		Outdoor		Project Composite	Ambient + Project	Increase
R1	63.3	44.9	50.0	47.9		55.0		57.0	64.2	0.9
R2	60.4	49.5	40.9	34.7		53.2		55.0	61.5	1.1
R3	60.1	49.5	49.9	42.7		60.7		61.4	63.8	3.7
R4	66.3	44.9	47.0	34.2		55.7		56.6	66.7	0.4
R5	69.2	44.9	52.2	42.8		62.1		62.6	70.1	0.9

[a] - Project traffic noise levels at each receptor is based on the traffic noise analysis for the roadway segment in front of the receptor, adjusted for distance and barrier (if present), as provided in the table below.

		Traffic Noise Levels, CNEL								
Receptor	Roadway Segment	Existing	Existing + Project	Project Only	distance to roadway, ft	Existing	Existing + Project	barrier	distance to Center Line	adj. for distance
R1	Cahuenga	70.8	70.8	44.9	10	70.8	70.8	0	40	0.0
R2	Lexington	65.8	65.9	49.5	10	65.8	65.9	0	25	0.0
R3	Lexington	65.8	65.9	49.5	10	65.8	65.9	0	25	0.0
R4	Cahuenga	70.8	70.8	44.9	10	70.8	70.8	0	40	0.0
R5	Cahuenga	70.8	70.8	44.9	10	70.8	70.8	0	40	0.0

AES
ACOUSTICAL ENGINEERING SERVICES

Outdoor Mechanical Equipment Noise Calculations

Project: 1200 Cahuenga

	Estimated Noise Levels, Leq from SOUNDPLAN		Hours of Operations Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)
Receptor	Leq	CNEL	12	3	9
R1	43.3	50.0	43.3	43.3	43.3
R2	34.2	40.9	34.2	34.2	34.2
R3	43.2	49.9	43.2	43.2	43.2
R4	40.3	47.0	40.3	40.3	40.3
R5	45.5	52.2	45.5	45.5	45.5

Receptor	Ambient CNEL	Ambient + Project (CNEL)	Increase (CNEL)	ambient (Leq)	Ambient + Project (Leq)	Increase (Leq)
R1	63.3	63.5	0.2	57.8	58.0	0.2
R2	60.4	60.4	0.0	52.6	52.7	0.1
R3	60.1	60.5	0.4	55.2	55.5	0.3
R4	66.3	66.4	0.1	60.3	60.3	0.0
R5	69.2	69.3	0.1	62.8	62.9	0.1

12/2/2022

Outdoor Noise Calculations

Project: 1200 Cahuenga

					Hours of Operations		
Estimated noise levels, Leq (FROM SOUNDPLAN)					Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)
Receptor	Sound System	Occupants	Total, Leq	CNEL	12	3	4
R1	50.6	39.5	50.9	55.0	50.9	50.9	47.4
R2	48.6	39.0	49.1	53.2	49.1	49.1	45.6
R3	56.5	41.5	56.6	60.7	56.6	56.6	53.1
R4	51.4	38.5	51.6	55.7	51.6	51.6	48.1
R5	57.7	45.5	58.0	62.1	58.0	58.0	54.5

Receptor	Project (CNEL)	Ambient (CNEL)	Ambient + Project (CNEL)	Increase (CNEL)	Project Noise, (Leq)	Ambient (Leq)	Ambient + Project (Leq)	Increase (Leq)
R1	55.0	63.3	63.9	0.6	50.9	57.8	58.6	0.8
R2	53.2	60.4	61.2	0.8	49.1	52.6	54.2	1.6
R3	60.7	60.1	63.4	3.3	56.6	55.2	59.0	3.8
R4	55.7	66.3	66.7	0.4	51.6	60.3	60.8	0.5
R5	62.1	69.2	70.0	0.8	58.0	62.8	64.0	1.2

AES
ACOUSTICAL ENGINEERING SERVICES

Parking Structure Noise Calculations

Project: 1200 Cahuenga

	Estimated Noise Levels, Leq from SOUNDPLAN		Hours of Operations Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)
Receptor	Leq	CNEL	12	3	9
R1	41.2	47.9	41.2	41.2	41.2
R2	28.0	34.7	28.0	28.0	28.0
R3	36.0	42.7	36.0	36.0	36.0
R4	27.5	34.2	27.5	27.5	27.5
R5	36.1	42.8	36.1	36.1	36.1

Receptor	Ambient CNEL	Ambient + Project (CNEL)	Increase (CNEL)	nighttime ambient (Leq)	Ambient + Project (Leq)	Increase (Leq)
R1	63.3	63.4	0.1	57.8	57.9	0.1
R2	60.4	60.4	0.0	52.6	52.6	0.0
R3	60.1	60.2	0.1	55.2	55.3	0.1
R4	66.3	66.3	0.0	60.3	60.3	0.0
R5	69.2	69.2	0.0	62.8	62.8	0.0

1200 Cahuenga
Source Levels in dB(A) - Mechanical

3

Name	Source type	Lw dB(A)	
Mechanical	Point	90.0	
Mechanical	Point	90.0	
Mechanical	Point	90.0	
Mechanical	Point	90.0	
Mechanical	Point	90.0	
Mechanical	Point	90.0	
Mechanical	Point	90.0	
Mechanical	Point	90.0	
Mechanical	Point	90.0	
Mechanical	Point	90.0	
Mechanical	Point	90.0	
Mechanical	Point	90.0	
Mechanical	Point	90.0	
Mechanical	Point	90.0	
Transformer Level 01	Point	70.0	

1200 Cahuenga
Contribution level - Mechanical

Source	Source type	Leq,d dB(A)
Receiver R1 Leq,d 43.3 dB(A)		
Transformer Level 01	Point	0.4
Mechanical	Point	35.6
Mechanical	Point	35.5
Mechanical	Point	34.9
Mechanical	Point	34.1
Mechanical	Point	33.5
Mechanical	Point	33.3
Mechanical	Point	32.8
Mechanical	Point	32.2
Mechanical	Point	20.2
Mechanical	Point	19.9
Mechanical	Point	19.3
Mechanical	Point	20.3
Mechanical	Point	19.7
Mechanical	Point	19.2
Receiver R2 Leq,d 34.2 dB(A)		
Transformer Level 01	Point	21.0
Mechanical	Point	20.7
Mechanical	Point	21.5
Mechanical	Point	22.6
Mechanical	Point	23.9
Mechanical	Point	25.5
Mechanical	Point	22.1
Mechanical	Point	23.1
Mechanical	Point	24.6
Mechanical	Point	21.1
Mechanical	Point	21.5
Mechanical	Point	21.6
Mechanical	Point	21.2
Mechanical	Point	21.3
Mechanical	Point	21.8
Receiver R3 Leq,d 43.2 dB(A)		
Transformer Level 01	Point	36.4
Mechanical	Point	29.6
Mechanical	Point	24.8
Mechanical	Point	24.4
Mechanical	Point	26.9
Mechanical	Point	30.6
Mechanical	Point	27.9

1200 Cahuenga
Contribution level - Mechanical

9

Source	Source type	Leq,d dB(A)
Mechanical	Point	26.1
Mechanical	Point	25.6
Mechanical	Point	29.4
Mechanical	Point	33.1
Mechanical	Point	33.4
Mechanical	Point	30.5
Mechanical	Point	32.5
Mechanical	Point	36.2
Receiver R4 Leq,d 40.3 dB(A)		
Transformer Level 01	Point	17.8
Mechanical	Point	20.2
Mechanical	Point	26.2
Mechanical	Point	27.0
Mechanical	Point	26.4
Mechanical	Point	21.3
Mechanical	Point	22.4
Mechanical	Point	27.6
Mechanical	Point	27.4
Mechanical	Point	31.6
Mechanical	Point	31.8
Mechanical	Point	32.0
Mechanical	Point	29.7
Mechanical	Point	30.3
Mechanical	Point	31.3
Receiver R5 Leq,d 45.5 dB(A)		
Transformer Level 01	Point	1.5
Mechanical	Point	29.4
Mechanical	Point	29.0
Mechanical	Point	28.1
Mechanical	Point	27.9
Mechanical	Point	36.8
Mechanical	Point	36.1
Mechanical	Point	32.8
Mechanical	Point	29.5
Mechanical	Point	37.0
Mechanical	Point	36.6
Mechanical	Point	36.3
Mechanical	Point	34.3
Mechanical	Point	33.9
Mechanical	Point	33.6

1200 Cahuenga
Source Levels in dB(A) - People

3

Name	Source type	Lw dB(A)	
People Level 01	Area	88.2	
People Level 02	Area	81.5	
People Level 02	Area	79.9	
People Level 03	Area	85.7	
People Level 03	Area	86.6	
People Level 03	Area	88.0	
People Level 03	Area	85.5	
People Level 04	Area	85.5	
People Level 04	Area	85.5	
People Level 04	Area	92.1	
People Level 04	Area	89.3	

1200 Cahuenga
Contribution level - People

Source	Source type	Leq,d dB(A)
Receiver R1 Leq,d 39.5 dB(A)		
People Level 01	Area	32.6
People Level 02	Area	28.3
People Level 02	Area	14.6
People Level 03	Area	20.5
People Level 03	Area	21.9
People Level 03	Area	24.4
People Level 03	Area	30.1
People Level 04	Area	27.8
People Level 04	Area	36.2
People Level 04	Area	21.0
People Level 04	Area	15.5
Receiver R2 Leq,d 39.0 dB(A)		
People Level 01	Area	24.6
People Level 02	Area	14.6
People Level 02	Area	15.5
People Level 03	Area	25.1
People Level 03	Area	17.7
People Level 03	Area	12.7
People Level 03	Area	21.7
People Level 04	Area	38.2
People Level 04	Area	23.3
People Level 04	Area	22.2
People Level 04	Area	15.6
Receiver R3 Leq,d 41.5 dB(A)		
People Level 01	Area	32.2
People Level 02	Area	9.0
People Level 02	Area	25.4
People Level 03	Area	39.1
People Level 03	Area	18.7
People Level 03	Area	13.7
People Level 03	Area	16.1
People Level 04	Area	24.4
People Level 04	Area	30.4
People Level 04	Area	33.9
People Level 04	Area	19.7
Receiver R4 Leq,d 38.5 dB(A)		
People Level 01	Area	22.2
People Level 02	Area	1.1
People Level 02	Area	17.2

1200 Cahuenga
Contribution level - People

Source	Source type	Leq,d dB(A)	
People Level 03	Area	26.3	
People Level 03	Area	26.8	
People Level 03	Area	31.1	
People Level 03	Area	10.2	
People Level 04	Area	28.6	
People Level 04	Area	31.5	
People Level 04	Area	28.5	
People Level 04	Area	32.7	
Receiver R5 Leq,d 45.5 dB(A)			
People Level 01	Area	38.4	
People Level 02	Area	5.3	
People Level 02	Area	28.1	
People Level 03	Area	31.2	
People Level 03	Area	36.5	
People Level 03	Area	39.7	
People Level 03	Area	12.5	
People Level 04	Area	17.0	
People Level 04	Area	38.8	
People Level 04	Area	24.0	
People Level 04	Area	36.8	

1200 Cahuenga
Source Levels in dB(A) - Speakers

3

Name	Source type	Lw dB(A)	
Speakers Level 01	Point	104.2	
Speakers Level 01	Point	104.2	
Speakers Level 01	Point	104.2	
Speakers Level 02	Point	104.2	
Speakers Level 02	Point	104.2	
Speakers Level 02	Point	104.2	
Speakers Level 02	Point	104.2	
Speakers Level 03	Point	104.2	
Speakers Level 03	Point	104.2	
Speakers Level 03	Point	104.2	
Speakers Level 03	Point	104.2	
Speakers Level 03	Point	104.2	
Speakers Level 03	Point	104.2	
Speakers Level 03	Point	104.2	
Speakers Level 03	Point	104.2	
Speakers Level 04	Point	104.2	
Speakers Level 04	Point	104.2	
Speakers Level 04	Point	104.2	
Speakers Level 04	Point	104.2	
Speakers Level 04	Point	104.2	
Speakers Level 04	Point	104.2	
Speakers Level 04	Point	104.2	
Speakers Level 04	Point	104.2	
Speakers Level 04	Point	104.2	
Speakers Level 04	Point	104.2	
Speakers Level 04	Point	104.2	
Speakers Level 04	Point	104.2	
Speakers Level 04	Point	104.2	
Speakers Level 04	Point	104.2	
Speakers Level 04	Point	104.2	
Speakers Level 04	Point	104.2	
Speakers Level 04	Point	104.2	
Speakers Level 04	Point	104.2	
Speakers Level 04	Point	104.2	

1200 Cahuenga
Contribution level - Speakers

9

Source	Source type	Leq,d dB(A)
Receiver R1 Leq,d 50.6 dB(A)		
Speakers Level 01	Point	42.4
Speakers Level 01	Point	42.9
Speakers Level 01	Point	38.9
Speakers Level 02	Point	27.6
Speakers Level 02	Point	34.5
Speakers Level 02	Point	29.0
Speakers Level 02	Point	12.0
Speakers Level 03	Point	26.3
Speakers Level 03	Point	20.9
Speakers Level 03	Point	24.6
Speakers Level 03	Point	29.5
Speakers Level 03	Point	18.6
Speakers Level 03	Point	34.5
Speakers Level 03	Point	33.7
Speakers Level 03	Point	30.5
Speakers Level 04	Point	32.2
Speakers Level 04	Point	26.3
Speakers Level 04	Point	28.8
Speakers Level 04	Point	28.7
Speakers Level 04	Point	27.0
Speakers Level 04	Point	30.6
Speakers Level 04	Point	25.2
Speakers Level 04	Point	31.9
Speakers Level 04	Point	34.8
Speakers Level 04	Point	36.2
Speakers Level 04	Point	35.1
Speakers Level 04	Point	34.3
Speakers Level 04	Point	40.9
Speakers Level 04	Point	41.9
Speakers Level 04	Point	37.2
Speakers Level 04	Point	32.7
Speakers Level 04	Point	32.0
Speakers Level 04	Point	14.8
Speakers Level 04	Point	14.2
Receiver R2 Leq,d 48.6 dB(A)		
Speakers Level 01	Point	20.5
Speakers Level 01	Point	27.6
Speakers Level 01	Point	30.3
Speakers Level 02	Point	21.1

Source	Source type	Leq,d dB(A)
Speakers Level 02	Point	19.6
Speakers Level 02	Point	28.3
Speakers Level 02	Point	27.4
Speakers Level 03	Point	12.2
Speakers Level 03	Point	11.7
Speakers Level 03	Point	24.3
Speakers Level 03	Point	21.5
Speakers Level 03	Point	41.4
Speakers Level 03	Point	30.3
Speakers Level 03	Point	25.8
Speakers Level 03	Point	26.6
Speakers Level 04	Point	31.5
Speakers Level 04	Point	33.9
Speakers Level 04	Point	39.2
Speakers Level 04	Point	42.2
Speakers Level 04	Point	42.6
Speakers Level 04	Point	15.6
Speakers Level 04	Point	16.3
Speakers Level 04	Point	31.4
Speakers Level 04	Point	18.9
Speakers Level 04	Point	18.4
Speakers Level 04	Point	17.4
Speakers Level 04	Point	28.6
Speakers Level 04	Point	22.8
Speakers Level 04	Point	28.5
Speakers Level 04	Point	29.6
Speakers Level 04	Point	29.9
Speakers Level 04	Point	28.5
Speakers Level 04	Point	14.0
Speakers Level 04	Point	14.3
Receiver R3 Leq,d 56.5 dB(A)		
Speakers Level 01	Point	49.6
Speakers Level 01	Point	36.0
Speakers Level 01	Point	33.5
Speakers Level 02	Point	14.5
Speakers Level 02	Point	13.6
Speakers Level 02	Point	38.8
Speakers Level 02	Point	33.3
Speakers Level 03	Point	13.4
Speakers Level 03	Point	14.1
Speakers Level 03	Point	15.7

1200 Cahuenga
Contribution level - Speakers

9

Source	Source type	Leq,d dB(A)
Speakers Level 03	Point	14.3
Speakers Level 03	Point	49.1
Speakers Level 03	Point	50.8
Speakers Level 03	Point	27.8
Speakers Level 03	Point	29.9
Speakers Level 04	Point	17.2
Speakers Level 04	Point	24.1
Speakers Level 04	Point	24.8
Speakers Level 04	Point	24.6
Speakers Level 04	Point	24.4
Speakers Level 04	Point	18.9
Speakers Level 04	Point	30.7
Speakers Level 04	Point	38.7
Speakers Level 04	Point	28.5
Speakers Level 04	Point	24.6
Speakers Level 04	Point	20.3
Speakers Level 04	Point	30.8
Speakers Level 04	Point	34.2
Speakers Level 04	Point	25.6
Speakers Level 04	Point	25.7
Speakers Level 04	Point	48.2
Speakers Level 04	Point	47.6
Speakers Level 04	Point	19.1
Speakers Level 04	Point	21.7
Receiver R4 Leq,d 51.4 dB(A)		
Speakers Level 01	Point	27.6
Speakers Level 01	Point	31.1
Speakers Level 01	Point	21.2
Speakers Level 02	Point	6.3
Speakers Level 02	Point	6.4
Speakers Level 02	Point	37.0
Speakers Level 02	Point	26.3
Speakers Level 03	Point	35.2
Speakers Level 03	Point	40.1
Speakers Level 03	Point	8.6
Speakers Level 03	Point	9.0
Speakers Level 03	Point	19.6
Speakers Level 03	Point	13.3
Speakers Level 03	Point	41.4
Speakers Level 03	Point	44.9
Speakers Level 04	Point	13.5

1200 Cahuenga
Contribution level - Speakers

Source	Source type	Leq,d dB(A)	
Speakers Level 04	Point	15.9	
Speakers Level 04	Point	26.6	
Speakers Level 04	Point	30.1	
Speakers Level 04	Point	28.5	
Speakers Level 04	Point	21.3	
Speakers Level 04	Point	21.3	
Speakers Level 04	Point	25.6	
Speakers Level 04	Point	17.8	
Speakers Level 04	Point	21.3	
Speakers Level 04	Point	28.7	
Speakers Level 04	Point	36.6	
Speakers Level 04	Point	44.6	
Speakers Level 04	Point	34.4	
Speakers Level 04	Point	33.9	
Speakers Level 04	Point	29.2	
Speakers Level 04	Point	29.5	
Speakers Level 04	Point	39.2	
Speakers Level 04	Point	43.3	
Receiver R5 Leq,d 57.7 dB(A)			
Speakers Level 01	Point	41.2	
Speakers Level 01	Point	40.6	
Speakers Level 01	Point	41.2	
Speakers Level 02	Point	10.0	
Speakers Level 02	Point	11.8	
Speakers Level 02	Point	7.7	
Speakers Level 02	Point	33.0	
Speakers Level 03	Point	50.0	
Speakers Level 03	Point	52.3	
Speakers Level 03	Point	10.4	
Speakers Level 03	Point	12.9	
Speakers Level 03	Point	15.4	
Speakers Level 03	Point	38.4	
Speakers Level 03	Point	45.3	
Speakers Level 03	Point	45.6	
Speakers Level 04	Point	19.0	
Speakers Level 04	Point	18.7	
Speakers Level 04	Point	16.8	
Speakers Level 04	Point	16.7	
Speakers Level 04	Point	25.7	
Speakers Level 04	Point	37.8	
Speakers Level 04	Point	39.7	

1200 Cahuenga
Contribution level - Speakers

9

Source	Source type	Leq,d dB(A)
Speakers Level 04	Point	36.1
Speakers Level 04	Point	37.5
Speakers Level 04	Point	38.3
Speakers Level 04	Point	39.2
Speakers Level 04	Point	37.8
Speakers Level 04	Point	44.9
Speakers Level 04	Point	41.3
Speakers Level 04	Point	41.8
Speakers Level 04	Point	24.0
Speakers Level 04	Point	24.8
Speakers Level 04	Point	47.4
Speakers Level 04	Point	45.4

1200 Cahuenga
Input data parking lots - Parking

Parking lot	PLT	Parking Spaces	
Parking Level 01 S	Visitors and staff	19	
Parking Level 01 N	Visitors and staff	36	

1200 Cahuenga
Contribution level - Parking

9

Source	Source type	Leq,d dB(A)
Receiver R1 Leq,d 41.2 dB(A)		
Parking Level 01 S	PLot	25.4
Parking Level 01 N	PLot	41.1
Receiver R2 Leq,d 28.0 dB(A)		
Parking Level 01 S	PLot	20.5
Parking Level 01 N	PLot	27.1
Receiver R3 Leq,d 36.0 dB(A)		
Parking Level 01 S	PLot	35.4
Parking Level 01 N	PLot	26.3
Receiver R4 Leq,d 27.5 dB(A)		
Parking Level 01 S	PLot	26.8
Parking Level 01 N	PLot	19.0
Receiver R5 Leq,d 36.1 dB(A)		
Parking Level 01 S	PLot	32.6
Parking Level 01 N	PLot	33.5

AES
Acoustical Engineering Services

Off-Site Traffic Noise Calculations

Project: 1200 Cahuenga Project

Traffic Distribution as % of ADT				
Vehicle Type	**Day**	**Eve**	**Night**	**Sub total**
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

PHV to ADT factor 10%

EXISTING CONDITIONS Roadway Segment	Roadway Width*, ft	Distance to Edge of Roadway, ft	Distance to Centerline, feet	Speed mph	Traffic Volume PHV	ADT	PHV to ADT factor	Barrier Atten.	Site Adjust., dBA	24-Hour CNEL
Cahuenga Boulevard										
- Between De Longpre Ave. and Fountain Ave.	60	10	40	35	1,678	16,780	10%	0	0	71.1
- Between Fountain Ave. and Lexington Ave.	60	10	40	35	1,576	15,760	10%	0	0	70.8
- Between Lexington Ave. and Santa Monica Blvd	60	10	40	35	1,557	15,570	10%	0	0	70.8
Vine Street										
- Between De Longpre Ave. and Fountain Ave.	70	10	45	35	2,544	25,440	10%	0	0	72.3
- Between Fountain Ave. and Lexington Ave.	70	10	45	35	2,490	24,900	10%	0	0	72.2
- Between Lexington Ave. and Santa Monica Blvd	70	10	45	35	2,470	24,700	10%	0	0	72.2
Fountain Avenue										
- Between Wilcox Ave. and Cahuenga Blvd.	40	10	30	30	1,021	10,210	10%	0	0	70.1
- Between Cahuenga Blvd. and Vine St.	40	10	30	30	1,045	10,450	10%	0	0	70.2
- Between Vine St. and El Centro Ave.	40	10	30	30	963	9,630	10%	0	0	69.9
Lexington Avenue										
- Between Wilcox Ave. and Cahuenga Blvd.	30	10	25	25	353	3,530	10%	0	0	66.5
- Between Cahuenga Blvd. and Vine St.	30	10	25	25	299	2,990	10%	0	0	65.8
- Between Vine St. and El Centro Ave.	40	10	30	25	249	2,490	10%	0	0	64.2

* Estimated based on Google Earth map.

** Calculated using FHWA's TNM Version 2.5 Computer Noise Model.

AES
ACOUSTICAL ENGINEERING SERVICES

Off-Site Traffic Noise Calculations
Project: 1200 Cahuenga Project

Traffic Distribution as % of ADT				
Vehicle Type	**Day**	**Eve**	**Night**	**Sub total**
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

PHV to ADT factor
10%

EXISTING + PROJECT CONDITIONS

Roadway Segment	Roadway Width*, ft	Distance to Edge of Roadway, ft	Distance to Centerline, feet	Speed mph	Traffic Volume PHV	Traffic Volume ADT	PHV to ADT factor	Barrier Atten.	Site Adjust., dBA	24-Hour CNEL
Cahuenga Boulevard										
- Between De Longpre Ave. and Fountain Ave.	60	10	40	35	1,680	16,800	10%	0	0	71.1
- Between Fountain Ave. and Lexington Ave.	60	10	40	35	1,580	15,800	10%	0	0	70.8
- Between Lexington Ave. and Santa Monica Blvd	60	10	40	35	1,560	15,600	10%	0	0	70.8
Vine Street										
- Between De Longpre Ave. and Fountain Ave.	70	10	45	35	2,547	25,470	10%	0	0	72.3
- Between Fountain Ave. and Lexington Ave.	70	10	45	35	2,492	24,920	10%	0	0	72.2
- Between Lexington Ave. and Santa Monica Blvd	70	10	45	35	2,473	24,730	10%	0	0	72.2
Fountain Avenue										
- Between Wilcox Ave. and Cahuenga Blvd.	40	10	30	30	1,023	10,230	10%	0	0	70.2
- Between Cahuenga Blvd. and Vine St.	40	10	30	30	1,045	10,450	10%	0	0	70.2
- Between Vine St. and El Centro Ave.	40	10	30	30	963	9,630	10%	0	0	69.9
Lexington Avenue										
- Between Wilcox Ave. and Cahuenga Blvd.	30	10	25	25	353	3,530	10%	0	0	66.5
- Between Cahuenga Blvd. and Vine St.	30	10	25	25	306	3,060	10%	0	0	65.9
- Between Vine St. and El Centro Ave.	40	10	30	25	252	2,520	10%	0	0	64.3

* Estimated based on Google Earth map.

** Calculated using FHWA's TNM Version 2.5 Computer Noise Model.

AES
ACOUSTICAL ENGINEERING SERVICES

Off-Site Traffic Noise Calculations

Project: 1200 Cahuenga Project

Traffic Distribution as % of ADT				
Vehicle Type	**Day**	**Eve**	**Night**	**Sub total**
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

PHV to ADT factor
10%

FUTURE NO PROJECT CONDITIONS

Roadway Segment	Roadway Width*, ft	Distance to Edge of Roadway, ft	Distance to Centerline, feet	Speed mph	Traffic Volume PHV	Traffic Volume ADT	PHV to ADT factor	Barrier Atten.	Site Adjust., dBA	24-Hour CNEL
Cahuenga Boulevard										
- Between De Longpre Ave. and Fountain Ave.	60	10	40	35	2,021	20,210	10%	0	0	71.9
- Between Fountain Ave. and Lexington Ave.	60	10	40	35	1,809	18,090	10%	0	0	71.4
- Between Lexington Ave. and Santa Monica Blvd	60	10	40	35	1,767	17,670	10%	0	0	71.3
Vine Street										
- Between De Longpre Ave. and Fountain Ave.	70	10	45	35	2,875	28,750	10%	0	0	72.8
- Between Fountain Ave. and Lexington Ave.	70	10	45	35	2,796	27,960	10%	0	0	72.7
- Between Lexington Ave. and Santa Monica Blvd	70	10	45	35	2,793	27,930	10%	0	0	72.7
Fountain Avenue										
- Between Wilcox Ave. and Cahuenga Blvd.	40	10	30	30	1,094	10,940	10%	0	0	70.4
- Between Cahuenga Blvd. and Vine St.	40	10	30	30	1,254	12,540	10%	0	0	71.0
- Between Vine St. and El Centro Ave.	40	10	30	30	1,035	10,350	10%	0	0	70.2
Lexington Avenue										
- Between Wilcox Ave. and Cahuenga Blvd.	30	10	25	25	396	3,960	10%	0	0	67.0
- Between Cahuenga Blvd. and Vine St.	30	10	25	25	345	3,450	10%	0	0	66.4
- Between Vine St. and El Centro Ave.	40	10	30	25	271	2,710	10%	0	0	64.6

* Estimated based on Google Earth map.

** Calculated using FHWA's TNM Version 2.5 Computer Noise Model.

Off-Site Traffic Noise Calculations

Project: 1200 Cahuenga Project

Traffic Distribution as % of ADT				
Vehicle Type	**Day**	**Eve**	**Night**	**Sub total**
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

PHV to ADT factor: 10%

FUTURE + PROJECT CONDITIONS Roadway Segment	Roadway Width*, ft	Distance to Edge of Roadway, ft	Distance to Centerline, feet	Speed mph	Traffic Volume PHV	Traffic Volume ADT	PHV to ADT factor	Barrier Atten.	Site Adjust., dBA	24-Hour CNEL
Cahuenga Boulevard										
- Between De Longpre Ave. and Fountain Ave.	60	10	40	35	2,023	20,230	10%	0	0	71.9
- Between Fountain Ave. and Lexington Ave.	60	10	40	35	1,813	18,130	10%	0	0	71.4
- Between Lexington Ave. and Santa Monica Blvd	60	10	40	35	1,770	17,700	10%	0	0	71.3
Vine Street										
- Between De Longpre Ave. and Fountain Ave.	70	10	45	35	2,878	28,780	10%	0	0	72.8
- Between Fountain Ave. and Lexington Ave.	70	10	45	35	2,798	27,980	10%	0	0	72.7
- Between Lexington Ave. and Santa Monica Blvd	70	10	45	35	2,797	27,970	10%	0	0	72.7
Fountain Avenue										
- Between Wilcox Ave. and Cahuenga Blvd.	40	10	30	30	1,096	10,960	10%	0	0	70.5
- Between Cahuenga Blvd. and Vine St.	40	10	30	30	1,254	12,540	10%	0	0	71.0
- Between Vine St. and El Centro Ave.	40	10	30	30	1,035	10,350	10%	0	0	70.2
Lexington Avenue										
- Between Wilcox Ave. and Cahuenga Blvd.	30	10	25	25	396	3,960	10%	0	0	67.0
- Between Cahuenga Blvd. and Vine St.	30	10	25	25	351	3,510	10%	0	0	66.5
- Between Vine St. and El Centro Ave.	40	10	30	25	274	2,740	10%	0	0	64.6

* Estimated based on Google Earth map.

** Calculated using FHWA's TNM Version 2.5 Computer Noise Model.

Date Printed: 12/2/2022